Algorithm for the Differential Diagnosis and Treatment of CONJUNCTIVITIS

Red Eye

Contact Lens Wearer?

Irritation? (Chemical or Mechanical)

No

Pain?

No

Blurred Vision?

No

Discharge?

No

Itching?

No

Irritant Conjunctivitis

Treatment options to consider:
Ocular lubricant
Cool compresses
(refer serious chemical injuries)

Yes: Purulent

Bacterial Conjunctivitis

Treatment options to consider:
Ocular antibiotic
Ocular lubricant
Self-care / eye hygiene

Yes: Watery

Viral or Allergic Conjunctivitis

Itching?

No

Refer to Dr or Optometrist

Yes

Photophobia?

Refer to Dr or Optometrist

Refer to Dr or Optometrist

Allergic Conjunctivitis, dry eye or blepharitis

Treatment options to consider:
Ocular antihistamine
Ocular mast-cell stabiliser
Ocular lubricant
Oral antihistamine
Self-care / eye hygiene

Yes

Refer to Dr or Optometrist

No

Itching?

No

Refer to Dr or Optometrist

Yes

Viral Conjunctivitis

Treatment options to consider:
Ocular lubricant
Self-care / eye hygiene
Guidance Notes:
Conjunctivitis is an inflammation of the conjunctiva which is the thin lining that protects the white of the eyes and inside the eyelids. It is rarely vision-threatening and is usually self-limiting. The inflammation can arise from either infectious or non-infectious causes and proper diagnosis of the aetiology is required to determine the most appropriate treatment.

**Bacterial Conjunctivitis**
Generally affects only one eye but can easily spread to the other eye.
*Signs and Symptoms:* include acute redness, eye discomfort described as a gritty irritation or burning, but not painful. The discharge which occurs is sticky and purulent (whitish-yellow or pus-like) and often causes the eyelids to stick together when waking in the morning. Vision is not usually affected, except the discharge may cause some blurring which clears with blinking.
*Management:* Usually resolves spontaneously within 7-10 days, however antibacterial eye-drops or ointment can hasten resolution time. **Chloramphenicol eye-drops:** 1-2 drops in each eye q2h while awake for the first 48 hours, followed by 1 drop q4h for a further 3 days. Alternatively, apply a short (1.5cm) strip of chloramphenicol eye ointment along the inside of each eyelid q3h. Drops could be used during the day and ointment at night. As bacterial conjunctivitis is contagious, advise patient to avoid touching their eyes or sharing towels and facecloths.

**Viral Conjunctivitis**
Viral conjunctivitis is often associated with an infection of the upper respiratory tract, a common cold, and/or a sore throat.
*Signs and Symptoms:* It usually produces a watery or mucous discharge, unlike the purulent discharge associated with bacterial infections. There may be a gritty or itching sensation, although the itch is not usually as severe as occurs with allergic conditions. The infection usually begins with one eye, but may spread easily to the other.
*Management:* There is no specific treatment for viral conjunctivitis and it usually resolves spontaneously within 7-10 days. However, it is acceptable to recommend ocular chloramphenicol to prevent secondary bacterial infection. Symptomatic relief may be achieved with cool compresses and artificial tears/eye lubricants. As viral conjunctivitis is contagious, advise patient to avoid touching their eyes or sharing towels and facecloths.

**Allergic Conjunctivitis**
Seasonal allergic conjunctivitis generally occurs in the hay-fever season, while perennial allergic conjunctivitis may occur at any time during the year when in contact with the allergen. A personal or family history of hay-fever, asthma or eczema is often associated with allergic conjunctivitis.
*Signs and Symptoms:* eyes are red/pink and look inflamed, an itching sensation is usually present (which can be severe) and this is the hallmark symptom of allergic conjunctivitis. A ‘ropy’, non-purulent mucoid discharge may cause the eyelids to feel sticky but do not usually stick together to the extent as with bacterial conjunctivitis.
*Management:* Allergic conjunctivitis may resolve when the causative allergen is removed. Consider also anti-allergy treatment: eg. ocular antihistamines, mast-cell stabilisers, sodium cromoglycate, oral antihistamines. Cool compresses and/or artificial tears/eye lubricants can provide symptomatic relief.

**Irritant Conjunctivitis**
Occurs due to a chemical or mechanical irritation of the conjunctiva. Chemical causes include shampoo in the eyes, swimming in a chlorinated pool, or other chemicals getting into the eye such as makeup or sunscreen. Mechanical causes may include stray eyelashes rubbing or the presence of a foreign body. The inflammation usually resolves with the removal of the irritant.
*Management:* Resolution usually comes with the removal of the irritant. Cool compresses and/or artificial tears/eye lubricants can provide symptomatic relief. Chemical injuries (particularly alkali burns) are medical emergencies as they can lead to severe scarring, and intraocular damage – refer immediately.

**Who to refer to an Optometrist or Doctor**
The presence of any of the following requires referral to an optometrist or doctor for further assessment:
- Contact lens wearers
- Severe pain inside the eye
- Vision is affected (which does not clear with blinking)
- Photophobia (sensitivity to light)
- A baby or child under two years of age
- Recent eye surgery or laser treatment
- Patient has glaucoma
- Swelling around the eye or the face
- Rash on the face associated with eye symptoms
- Pupil looks unusual, e.g. irregular, torn, dilated or unresponsive to light
- Patient feels unwell, eg. headache or nausea along with the eye symptoms
- Suspected foreign body
- Copious purulent discharge
- Any family history of blood disorders - aplastic anaemia has been reported rarely with the use of chloramphenicol
- No improvement, or symptoms have worsened after 48 hours of treatment
- Physical eye injury

**Contact Lens Wearers**
Contact lens wearers have a greater risk for more serious eye conditions such as giant papillary conjunctivitis and keratoconjunctivitis. These patients must be referred to an optometrist or doctor without delay, for an eye examination to assess eye health more thoroughly. If contact lens wearers present with a prescription from an optometrist or doctor for ocular chloramphenicol, they should be reminded to not wear their contacts for the duration and for 24 hours after finishing treatment. The infected pair of disposable lenses should be discarded and permanent lenses should be cleaned and disinfected thoroughly according to their recommended instructions.

**Pregnancy and Breastfeeding**
The safety of chloramphenicol in pregnancy and breastfeeding has not been conclusively established. Due to the self-limiting nature of bacterial conjunctivitis, chloramphenicol is not recommended for use during the last week of pregnancy or during breastfeeding.

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