

Management of infective conjunctivitis in primary care

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Summary of key learning points

- Infective conjunctivitis is a common self-limiting condition.
- Diagnosis is clinical.
- Swabs are unnecessary in routine practice.
- Topical antibiotics should not be routinely prescribed unless special circumstances require shorter symptom duration.
- Education of patient, family and school is important to reduce expectation of antibiotic drops.
- If symptoms worsen or persist beyond ten days, stop all drops and seek an Ophthalmology opinion.
- **Red flags:** red sticky eyes in newborn; using contact lenses if corneal symptoms (photophobia, watering).

Evidence base

- Little evidence that symptoms or signs distinguish between viral or bacterial causes [1].

- In proven bacterial conjunctivitis meta-analysis shows faster time to cure with topical antibiotics. However 60 per cent of signs and 40 per cent swabs are negative in five days even in placebo group [2].
- Although self-limiting, clinically diagnosed infective conjunctivitis treated with antibiotic drops has lower symptom severity and quicker resolution [3, 4].
- Be aware that this effect is less in children [5].
- Cochrane Database Systematic Review 2012 showed no reports of serious outcomes in either the active or placebo arms of 11 reviewed trials (3673 participants) [6].
- Therefore, patients do not appear to come to harm if topical antibiotics are withheld [6].

Why is this important to GPs?

- Acute red eye is common estimated at two to five per cent of all GP consultations [7].
- Acute infective conjunctivitis probably accounts for a third of all acute red eyes presenting to GPs [8].
- With over the counter chloramphenicol drops available since 2005, the diagnosis may also include elements of drop allergy and preservative-related red eye.
- GP should encourage supportive measures other than topical antibiotics.
- Of course there are other causes of acute red eye which are managed differently.

Pathophysiology and clinical stereotypes

- Infective conjunctivitis is self limiting and is thought to be caused by viruses or bacteria in almost equal frequency.
- In studies, between 30 to 50 per cent conjunctival swabs are positive for bacteria [1-3]. The commonest reported pathogens are streptococcus pneumoniae, staphylococcus aureus and haemophilus influenzae. Because swab results do not influence disease course in most cases, bacterial culture is used only in severe or atypical disease.
- The following rules of thumbs are useful: bacterial - glued lids on waking; viral – usually a history of previous episodes; allergic – itching is common [1].
- Conjunctivitis caused by sexually transmitted infections (STI) are often more severe (gonorrhoea) or with prolonged mucopurulent discharge (chlamydia) and require swabs, contact tracing and treatment.
- **Red flag:** neonatal (less than four weeks) sticky eye **with redness** must be referred for specialist care urgently. The neonatal cornea is vulnerable to penetration by potential STI organisms. Sticky eye without redness is managed using tear sac massage and lid cleansing (neonatal lacrimal duct obstruction).

- **Red flag:** contact lens related infective conjunctivitis with corneal involvement. Make a habit of routinely asking whether contact lenses are worn. If available, use topical fluorescein to identify corneal staining (epithelial defect). Refer urgently if suspected corneal ulcer, and do not give antibiotics in the interim as this may interfere with a subsequent corneal culture. Have a low threshold for referral.

Differential

- Blepharoconjunctivitis and dry eye. Occurs when the acute episode is superimposed on longstanding intermittent lid redness, lash crusts, grittiness and watering. Best treated with lid hygiene (local heat, oil gland massage and lid scrubs) and tear supplements until natural tear quality improves. Topical antibiotics have no place in treatment here.
- Atopic or allergic conjunctivitis. Recurrent seasonal or environment related red eye often with other history of atopy. Topical mast cell inhibitors and lid hygiene to reduce allergen load.
- Toxic – drop allergy, preservative-related. Periorbital skin involvement, and often inferior medial conjunctiva worse affected in keeping with topical exposure.
- Physiological. Over use of drops that whiten conjunctiva for cosmetic reasons, leads to permanently dilated vessels and red eyes.
- Contact lens related. Often worse redness in superior conjunctiva especially under upper lid where large papillae may develop. Stop contact lens use, avoid all preserved topical medication. If available, use fluorescein drops to check for corneal stain. Otherwise lid hygiene, non-preserved lubricant drops or mast cell stabiliser.
- Intraocular causes of red eye usually affect vision and cause significant pain – for example acute glaucoma, scleritis, keratitis, uveitis (photophobia) and if severe signs refer for ophthalmic diagnosis and management.
- Consider systemic associations, for example thyroid eye disease.

How to manage acute infective conjunctivitis in adults

- There is considerable discussion in the literature around prescribing topical antibiotics for a self-limiting condition. Patient education is probably the most important factor here.
- Delayed antibiotic prescribing for three days is the recommended strategy for conjunctivitis in primary care. This strategy is associated with reduced antibiotic use and no evidence of medicalisation [3].
- This trial showed that when GPs did not prescribe antibiotics for acute infective conjunctivitis, significant antibiotic use (30 per cent) still occurred as patients would later re-present to the GP or buy over the counter topical antibiotics.

- Infective conjunctivitis is best treated by bathing eyes with cool clean water, using lubricating drops, using moist cotton wool to clean the lids, and abstain from contact lens use.
- A patient information leaflet may reduce time in consultation advising that symptoms remain the same but may persist for one day longer if no drops used.

How to manage acute infective conjunctivitis in children

- Even less evidence that antibiotic drops reduce symptom severity or duration of symptoms [5].
- Although official advice is that isolated cases (as opposed to outbreaks) of red eye do not need to stay away from school [9] many nursery and primary schools run an exclusion policy [10] advising same day attendance to GP and medication. This conflict needs to be resolved.

Key messages for commissioners

- A program of GP and patient education around eye health could be funded, for example the use of effective lid hygiene practice, eye drop self-administration, and so on.
- Effective and regular communication between GPs and local eye care professionals in high street, community clinics and hospital primary care services to develop protocols.
- Involvement of local nurseries and primary schools in protocol implementation.
- Topical antibiotic prescribing guidelines and feedback to individual practices.

Useful resources

- e-Learning for Health www.e-lfh.org.uk/projects/egp/index.html
- Public Health England documents: Factsheet on Conjunctivitis and Conjunctivitis information leaflet 2013. Both available from www.hpa.org.uk/infections/topics_az/schools (accessed 2 February 2014)

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