



Conjunctivitis (bacterial)

The CMGs are guidelines on the diagnosis and management of a range of common and rare, but important, eye conditions that present with varying frequency in primary and first contact care.

Aetiology

Bacterial infection of the conjunctiva, typically by:

- Staphylococcus species
- Streptococcus pneumoniae
- Haemophilus influenzae
- Moraxella catarrhalis

Predisposing factors

Children and the elderly have an increased risk of infective conjunctivitis

(NB Bacterial conjunctivitis in the first 28 days of life is a serious condition that must be referred urgently to the ophthalmologist. See Clinical Management Guideline on [Ophthalmia Neonatorum](#))

- contamination of the conjunctival surface
- superficial trauma
- contact lens wear *(NB infection may be Gram -ve)*
- secondary to viral conjunctivitis
- recent cold, upper respiratory tract infection *(NB refer also to Clinical Management Guideline on [Conjunctivitis \(viral, nonherpetic\)](#) or sinusitis)*
- diabetes (or other disease compromising the immune system)
- steroids (systemic or topical, compromising ocular resistance to infection)
- blepharitis (or other chronic ocular inflammation)

Symptoms

- Acute onset of:
 - redness
 - discomfort, usually described as burning or grittiness
 - discharge (may cause temporary blurring of vision)
 - crusting of lids (often stuck together after sleep and may have to be bathed open)
- Usually bilateral – one eye may be affected before the other (by one or two days)

Signs

- Lid crusting
- Purulent or mucopurulent discharge
- Conjunctival hyperaemia – maximal in fornices
- Tarsal conjunctiva may show mild papillary reaction
- Cornea: usually no involvement (occasionally SPK – mainly in lower third of cornea). If cornea significantly involved, consider possibility of gonococcal infection
- Pre-auricular lymphadenopathy: usually absent

Differential diagnosis

- Other forms of conjunctivitis
 - epidemic keratoconjunctivitis (e.g. adenovirus)
 - Herpes (simplex or zoster)
 - Chlamydial infection
 - allergy

- Other causes of acute red eye
 - angle closure glaucoma
 - infective keratitis
 - anterior uveitis

Management by optometrist

Practitioners should recognise their limitations and where necessary seek further advice or refer the patient elsewhere

GRADE Level of evidence and strength of recommendation always relates to the statement(s) immediately above

Non pharmacological

- Often resolves in 5-7 days without treatment
- Bathe/clean the eyelids with lint or cotton wool dipped in sterile saline or boiled (cooled) water to remove crusting

(GRADE: Level of evidence = low, Strength of recommendation = strong)*

- Advise patient that condition is contagious (do not share towels, etc.)

Pharmacological

Treatment with topical antibiotic may improve short-term outcome and render patient less infectious to others

(GRADE: Level of evidence = high, Strength of recommendation = strong)*

Alternatives include: chloramphenicol 0.5% eye drops, chloramphenicol 1% ointment, azithromycin 1.5% eye drops, fusidic acid 1% viscous eye drops (NB high cost and narrower spectrum of activity than chloramphenicol)

This recommendation is based on the conclusions of a Cochrane Review (Sheikh and Hurwitz 2012) which included trials conducted in primary and secondary care. However, an individual patient meta-analysis of studies exclusively based in primary care (Jefferis et al 2011) found only a marginal benefit of antibiotics over placebo. Patients with purulent discharge or a mild severity of red eye were found to benefit most from treatment with antibiotics

Contact lens wearers with a diagnosis of bacterial conjunctivitis should be treated with a topical antibiotic effective against Gram -ve organisms, e.g. a quinolone such as levofloxacin or moxifloxacin. Contact lenses should not be worn during the treatment period

(GRADE: Level of evidence = low, Strength of recommendation = strong)*

Advise patient to return/seek further help if symptoms persist beyond 7 days

Management category

B3: management to resolution. Refer if condition fails to resolve, or if there is corneal involvement.

Possible management by ophthalmologist

If resistant to treatment, or recurrent:

- conjunctival swabs taken for microscopy and culture and/or PCR analysis
- treatment with other antibiotics, based on culture results

Evidence base

* GRADE: Grading of Recommendations, Assessment, Development and Evaluation (www.gradingworkinggroup.org)

Sources of evidence

Sheikh A, Hurwitz B, van Schayck CP, McLean S, Nurmatov U. Antibiotics versus placebo for acute bacterial conjunctivitis. Cochrane Database of Systematic Reviews 2012, Issue 9. Art. No.: CD001211

Jefferis J, Perera R, Everitt H, van Weert H, Rietveld R, Glasziou P, Rose P. Acute infective conjunctivitis in primary care: who needs antibiotics? An individual patient data meta-analysis. [Review] British Journal of General Practice 2011; 61(590):e542-8

Lay summary

Acute bacterial conjunctivitis is an infection of the eye in which one or both eyes become red with associated discomfort. The condition is not normally serious and in most cases clears up without treatment. People with acute conjunctivitis are often given antibiotics, usually in the form of eye drops or ointment, to speed recovery. However, the benefits of antibiotics for the treatment of bacterial conjunctivitis have been questioned. A review of randomised clinical trials comparing antibiotic eye drops to placebo concluded that antibiotics can speed up the resolution of acute conjunctivitis. However, the benefits are less clear when the results of trials conducted exclusively in community GP practices are considered, since these patients tend to have a less severe form of conjunctivitis than would be expected in hospital practice.

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Version 11

Date of search 24.04.16

Date of revision 13.06.16

Date of publication 17.10.16

Date for review 23.04.18

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