

## Chloramphenicol treatment for acute infective conjunctivitis in children

### Full reference and link to full text of paper

Rose PW, Harnden A, Brueggemann AB, Perera R, Sheikh A, Crook D, Mant D. Chloramphenicol treatment for acute infective conjunctivitis in children in primary care: a randomised double-blind placebo-controlled trial. *Lancet*. 2005; **366**:37-43.

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(05\)66709-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(05)66709-8/fulltext) (sign in required, not open access)

### Summary

Acute infective conjunctivitis is one of the most common eye problems seen in general practice, particularly in children. At the time of this study, evidence came from secondary care which tends to mean only patients with more extreme symptoms are included. These earlier trials were mostly in favour of treatment with antibiotics but also found that a large proportion of cases resolved with placebo alone.

This was a randomised double-blind trial. Participants were randomised to receive either chloramphenicol or placebo eye drops which were supplied in identical bottles labelled A and B. Only people who were not otherwise involved in the trial knew which was which. As part of the study, microbiological samples were also taken and analysed, in order to identify the bacteria causing the symptoms and to check if the infection had been cured or improved.

Overall, the study found that in this patient group, there was no significant difference in cure rate after 7 days with chloramphenicol compared with placebo. With chloramphenicol treatment, 140/162 (86%) showed clinical cure after 7 days compared with 128/155 (83%) in the placebo group. The risk difference was 3.8% (95% confidence interval of -4.1% to 11.8%). As the confidence interval includes 0, the difference is not significant. They concluded that, in general practice, antibiotics are not necessary for treating acute infective conjunctivitis in children.

### PICO

**Population:** 326 children ages 6 months to 12 years, from general practices in the Oxford area, with a clinical diagnosis of conjunctivitis.

**Intervention:** Chloramphenicol eye drops.

**Control:** Placebo eye drops.

**Outcomes:** The primary outcome measure was clinical cure rate after 7 days. Other outcomes assessed include: time to cure, clinical cure at day 3, microbiological cure at day 7 and relapse rate within 6 weeks.

### Key Researcher

David Mant led the Department of Primary Health Care at Oxford University from 1998 when it was first established until his retirement in 2011. After studying at Cambridge University then Birmingham Medical School, he undertook post-graduate training in general practice and public health. He became a Clinical Lecturer at the University of Oxford in 1983 while also a general practitioner at South Oxford Health Centre, where he continued to work as an NHS service general practitioner for the next 28 years.

### Impact

This paper was joint winner of the RCGP Research Paper of the Year Award for 2005. However, NICE guidelines recommend treatment with chloramphenicol for acute bacterial conjunctivitis, in contrast to the study's findings. Around the time the paper was published, chloramphenicol eye drops became available from pharmacists without a prescription.

### Thinking points

1. The same research group also published a very interesting qualitative article on the reasons why GPs prescribe antibiotics for acute infective conjunctivitis in children:  
<https://academic.oup.com/fampra/article/23/2/226/527311>

(Rose PW, Ziebland S, Harnden A, Mayon-White R, and Mant D. Why do General Practitioners prescribe antibiotics for acute infective conjunctivitis in children? Qualitative interviews with GPs and a questionnaire survey of parents and teachers. *Family practice* 2006; **23**: 226–232).

2. A number of parents consented to have their children followed up but not to be randomised, mainly because the parents wanted them to be given an antibiotic. More children in this group complained of pain or soreness than either of the trial arms. The mean age in this group was 3.7 years.
3. The original assumption was that the conjunctivitis would be caused by bacteria in 60% of participants. However, the microbiological tests found that 80% were bacterial.
4. The unexpectedly high proportion of bacterial events and the high cure rate meant the trial did not need to recruit as many patients as expected and so it was stopped.