



## When should acute nonvenereal conjunctivitis be treated with topical antibiotics?

### EVIDENCE-BASED ANSWER

Children with suspected or culture-proven acute nonvenereal bacterial conjunctivitis should be treated with topical antibiotics, which hastens clinical and microbiological remission and may prevent potentially serious morbidity. In light of recent evidence regarding the self-limiting nature of conjunctivitis in adults and the development of antibiotic resistance, a "wait-and-see" approach with careful follow-up may be reasonable for adults, but this approach has not been evaluated. (Grade of recommendation: C, based on extrapolation from systematic reviews of specialty clinic trials and cohort studies.)

### EVIDENCE SUMMARY

Conjunctivitis accounts for 1% to 2% of office visits to primary care practitioners.<sup>1</sup> Conjunctivitis is more commonly caused by bacteria in children (50% in 1 study<sup>2</sup>) than in adults, in whom viral conjunctivitis predominates.<sup>3</sup> Treating suspected or culture-proven acute bacterial conjunctivitis with topical antibiotics significantly shortens the clinical course of the disease and results in higher microbiological cure rates than placebo.<sup>1,4,5</sup> A meta-analysis of 3 trials based in specialty clinics or hospitals reported significant clinical cure or improvement of bacterial conjunctivitis with 2 to 5 days of topical antibiotics compared with placebo (RR = 1.31, 95% CI, 1.11-1.55, number needed to treat = 5).<sup>1</sup> Other articles have reported corneal or systemic complications of bacterial conjunctivitis. For example, 1 review reports that 25% of children with *Haemophilus influenzae* conjunctivitis develop otitis media.<sup>2</sup>

Although there is a small risk of complications and longer time course when bacterial conjunctivitis is left untreated, the disease is often self-limited, with a 64% clinical remission rate in patients treated for 2 to 5 days with placebo.<sup>1</sup> The rate of spontaneous remission is much higher for adults than for children (71.6% vs 28%, respectively). The Cochrane meta-analysis reported a similar clinical cure rate in children for 6 to 10 days of treatment with topical antibiotics versus placebo. A systematic review of 5 placebo-controlled RCTs reported no serious adverse outcomes in con-

junctivitis patients regardless of treatment group.<sup>4</sup>

Antibiotic resistance is a growing problem. Studies of fluoroquinolone resistance rates report a range of 4% to 50% for ocular bacteria.<sup>6</sup> The 50% resistance rate occurred after 4 weeks of topical treatment in postcataract surgery patients.

Overall, this evidence suggests that for adults, watchful waiting rather than initially treating with antibiotics is reasonable, given the self-limited nature and lack of serious outcomes in untreated patients as well as growing concern about antibiotic resistance. Note that this recommendation applies only to acute nonvenereal conjunctivitis. It is generally accepted that conjunctivitis caused by gonococcus or chlamydia should be suspected in all newborns and in severe cases in sexually active young adults. These cases warrant culturing and antibiotic treatment to prevent serious complications.<sup>7</sup>

### RECOMMENDATIONS FROM OTHERS

The American Optometric Association consensus guideline states that ideal treatment should be based on the specific causative organism. The guideline concludes that treatment of bacterial conjunctivitis with antibiotics can reduce symptoms, duration of illness, and chances of recurrence.<sup>8</sup>

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Clinical Commentary by Carin Reust, MD, MSPH, at <http://www.fpin.org>.

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