

Different antibiotic treatments for group A streptococcal pharyngitis.

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Abstract

BACKGROUND:

Antibiotics provide only modest benefit in treating sore throat, although effectiveness increases in participants with positive throat swabs for group A beta-haemolytic streptococci (GABHS). It is unclear which antibiotic is the best choice if antibiotics are indicated.

OBJECTIVES:

To assess the evidence on the comparative efficacy of different antibiotics in: (a) alleviating symptoms (pain, fever); (b) shortening the duration of the illness; (c) preventing relapse; and (d) preventing complications (suppurative complications, acute rheumatic fever, post-streptococcal glomerulonephritis). To assess the evidence on the comparative incidence of adverse effects and the risk-benefit of antibiotic treatment for streptococcal pharyngitis.

SEARCH METHODS:

We searched CENTRAL 2012, Issue 10, MEDLINE (1966 to October week 2, 2012), EMBASE (1974 to October 2012) and Web of Science (2010 to October 2012).

SELECTION CRITERIA:

Randomised, double-blind trials comparing different antibiotics and reporting at least one of the following: clinical cure, clinical relapse, complications, adverse events.

DATA COLLECTION AND ANALYSIS:

Two authors independently screened trials for inclusion and extracted data.

MAIN RESULTS:

Seventeen trials (5352 participants) were included; 16 compared with penicillin (six with cephalosporins, six with macrolides, three with carbacephem and one with sulfonamides), one trial compared clindamycin and ampicillin. Randomisation reporting, allocation concealment and blinding were poor. There was no difference in symptom resolution between cephalosporins and penicillin (intention-to-treat (ITT) analysis; $N = 5$; $n = 2018$; odds ratio for absence of resolution of symptoms (OR) 0.79, 95% confidence interval (CI) 0.55 to 1.12). Clinical relapse was lower with cephalosporins ($N = 4$; $n = 1386$; OR 0.55, 95% CI 0.31 to 0.99; overall number needed to treat to benefit (NNTB) 50), but found only in adults (OR 0.42, 95% CI 0.20 to 0.88; NNTB 33). There were no differences between macrolides and penicillin. Carbacephem showed better symptom resolution post-treatment ($N = 3$; $n = 795$; OR 0.70, 95% CI 0.49 to 0.99; NNTB 14), but only in children ($N = 2$; $n = 233$; OR 0.57, 95% CI 0.33 to 0.99; NNTB 8.3). Children experienced more adverse events with macrolides ($N = 1$, $n = 489$; OR 2.33; 95% CI 1.06 to 5.15).

AUTHORS' CONCLUSIONS:

Evidence is insufficient to show clinically meaningful differences between antibiotics for GABHS tonsillopharyngitis. Limited evidence in adults suggests cephalosporins are more effective than penicillin for relapse, but the NNTB is high. Limited evidence in children suggests carbacephem is more effective for symptom resolution. Data on complications are too scarce to draw conclusions. Based on these results and considering the low cost and absence of resistance, penicillin can still be recommended as first choice.

Update of

- Cochrane Database Syst Rev. 2010;(10):CD004406.

PMID: 23633318