Duration of antibacterial treatment for uncomplicated urinary tract infection in women.
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Abstract

Background
Uncomplicated urinary tract infection (UTI) is a common disease, occurring frequently in young sexually active women. In the past, seven day antibiotic therapy was recommended while the current practice is to treat uncomplicated UTI for three days.

Objectives
To compare the efficacy and safety of three-day antibiotic therapy to multi-day therapy (five days or longer) on relief of symptoms and bacteriuria at short-term and long-term follow-up.

Search methods
The Cochrane Library (Issue 1, 2004), the Cochrane Renal Group's Register of trials (July 2003), EMBASE (January 1960 to August 2003), and MEDLINE (January 1966 to August 2003) were searched. We scanned references of all included studies and contacted the first or corresponding author of included trials and the pharmaceutical companies.

Selection criteria
Randomised controlled trials comparing three-days oral antibiotic therapy with multi-day therapy (five days and longer) for uncomplicated cystitis in 18 to 65 years old non-pregnant women without signs of upper UTI.

Data collection and analysis
Data concerning bacteriological and symptomatic failure rates, occurrence of pyelonephritis and adverse effects were extracted independently by two reviewers. Risk ratio (RR) and their 95% confidence intervals (CI) were estimated. Outcomes were also extracted by intention-to-treat analysis whenever possible.

Main results
Thirty-two trials (9605 patients) were included. For symptomatic failure rates, no difference between three-day and 5-10 day antibiotic regimen was seen short-term (RR 1.06, 95% CI 0.85 to 1.30) and long-term follow-up (RR 1.08, 95% CI 0.94 to 1.27). Comparison of the bacteriological failure rates showed that three-day therapy was less effective than 5-10 day therapy for the short-term follow-up, however this difference was observed only in the subgroup of trials that used the same antibiotic in the two treatment arms (RR 1.37, 95% CI 1.07 to 1.74, P = 0.01). This difference was more significant at long-term follow-up (RR 1.43, 95% CI 1.19 to 1.73, P = 0.0002). Adverse effects were significantly more common in the 5-10 day treatment group (RR 0.63, 95% CI 0.74 to 0.93, P = 0.030). Results were consistent for subgroup and sensitivity analyses.

Authors' conclusions
Three days of antibiotic therapy is similar to 5-10 days in achieving symptomatic cure during uncomplicated UTI treatment, while the longer treatment is more effective in obtaining bacteriological cure. In spite of the higher rate of adverse effects, treatment for 5-10 days could be considered for treatment of women in whom eradication of bacteriuria is important.