Duration of treatment for asymptomatic bacteriuria during pregnancy

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An updated version of this systematic review has been published and can be found online at www.cochrane.org. We will soon update the below RHL summary to reflect the updated findings of the systematic review.

RHL summary

Findings of the review: The objective of this review was to assess the advantages and disadvantages of treatments of different durations for asymptomatic bacteriuria in pregnancy. Thirteen trials (1622 women) comparing single-dose treatment with four- and seven-day treatments were included in the review. Eleven trials had been conducted in high-resource settings and two in low-resource ones. Various antimicrobial drugs were used in the trials, e.g. ampicillin, nitrofurantoin, cephalexin, fosfomycin trometamol, fosfomycin, amoxicillin-clavulanate, amoxicillin, co-trimoxazole, trimethoprim, and other sulphonamides. Ten trials had compared the same antimicrobial agent administered in regimens of different durations, and the others had compared different medications. Based on studies of limited quality, the “no cure rate” (determined by repeated cultures) with a single dose was higher than that with treatments lasting four and seven days. However, this difference was not statistically significant and showed high heterogeneity. Single-dose treatment was associated with fewer side-effects. No difference was seen when different drugs were compared. The rate of recurrence of asymptomatic bacteriuria was similar between different regimens used.

Implementation: In a comparison that did not reach statistical significance, single-dose regimen for asymptomatic bacteriuria appears to be less effective than four or seven days of treatment. Further high-quality studies with commonly used antimicrobial agents for asymptomatic bacteriuria are needed to obtain better evidence.

Cochrane review


Abstract

A Cochrane systematic review has shown that drug treatment of asymptomatic bacteriuria in pregnant women substantially decreases the risk of pyelonephritis and reduces the risk of preterm delivery. However,
it is not clear whether single-dose therapy is as effective as longer conventional antibiotic treatment.

To assess the effects of different durations of treatment for asymptomatic bacteriuria in pregnancy.

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (31 August 2011) and reference lists of identified articles.

Randomized and quasi-randomized trials comparing antimicrobial therapeutic regimens that differed in duration (particularly comparing single dose with longer duration regimens) in pregnant women diagnosed with asymptomatic bacteriuria.

We assessed trial quality and extracted data independently.

We included 13 studies, involving 1622 women. All were comparisons of single-dose treatment with four- to seven-day treatments. The trials were generally of limited quality. The 'no cure rate' for asymptomatic bacteriuria in pregnant women was slightly higher for the single-dose than for the short-course treatment; however, these results were not statistically significant and showed heterogeneity. When comparing the trials that used the same antibiotic in both treatment and control groups with the trials that used different antibiotics in both groups, the 'no cure rate' risk ratio was similar. There was no statistically significant difference in the recurrence of asymptomatic bacteriuria rate between treatment and control groups. Slight differences were detected for preterm births and pyelonephritis although, apart from one trial, the sample size of the trials was inadequate. Single-dose treatment was associated with a decrease in reports of 'any side-effects'.

Single-dose regimen of antibiotics may be less effective than the seven-day regimen. Women with asymptomatic bacteriuria in pregnancy should be treated by the standard regimen of antibiotics until more data become available testing seven-day compared with three- or five-day regimens.

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