

Treatment of Asymptomatic Bacteriuria Might Be Harmful

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(See the Major Article by Cai et al on pages 1655–61.)

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In this issue of *Clinical Infectious Diseases*, Cai et al present a follow-up study [1] to their previously published prospectively randomized cohort study in which female patients with recurrent urinary tract infection (UTI) were followed clinically, but also investigated microbiologically at regular visits up to 1 year [2]. One group (A) was not treated, and the other group (B) was treated if asymptomatic bacteriuria was diagnosed, with the result that more symptomatic UTIs occurred in group B than in group A. The present study started immediately after the end of the first study. The patients remained in their groups and were followed every 6 months up to about 3 years. However, in the follow-up study [1], patients received antibiotic therapy only in case of a symptomatic UTI. Nevertheless, group B experienced statistically significantly more symptomatic UTIs

than group A, although the therapeutic strategy was the same. In addition, the resistance rates of isolated *Escherichia coli* against amoxicillin-clavulanic acid, cotrimoxazole, and ciprofloxacin were significantly higher in group B than in group A. This finding is especially interesting, as these antibiotics were used only in a few cases during the follow-up study.

In 2 previous studies, continuous antibiotic prophylaxis with cotrimoxazole was compared to prophylaxis with cranberry [3] or lactobacilli [4]. Both studies showed higher resistance rates of commensal *E. coli* to cotrimoxazole in urine and feces in the antibiotic arms compared with the nonantibiotic arms. Thus, the question arises whether the higher antibiotic resistance in the studies by Cai et al occurred already during the first study [2], because in the current study [1], both groups were treated with the same antibiotic strategy. Considering both studies together, a somewhat higher antibiotic consumption was found in group B, which apparently translated also into higher antibiotic resistance rates of the urinary pathogens.

The results of all these studies confirm the current guidelines [5] to preferably incorporate nonantibiotic strategies for prevention of these very frequent, but generally benign infections, if these strategies are confirmed to be effective in well-designed clinical studies [6]. Such

strategies may also be important to decrease the general antibiotic consumption in the population and thus to slow down emergence of antibiotic resistance; as shown in an interventional comparative study, antibiotic resistance, once established, has a low probability to be reversed, at least for trimethoprim and cotrimoxazole [7].

Note

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Both authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

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