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Brief Correspondence

Benefits and Harms of Treatment of Asymptomatic Bacteriuria: A Systematic Review and Meta-analysis by the European Association of Urology Urological Infection Guidelines Panel

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Article info

Article history:

Accepted July 11, 2017

Associate Editor:

James Catto

Keywords:

Asymptomatic bacteriuria
Antibiotic treatment
Urinary tract infection

Abstract

People with asymptomatic bacteriuria (ABU) are often unnecessarily treated with antibiotics risking adverse effects and antimicrobial resistance. We performed a systematic review to determine any benefits and harms of treating ABU in particular patient groups. Relevant databases were searched and eligible trials were assessed for risk-of-bias and Grading of Recommendations, Assessment, Development and Education quality. Where possible, a meta-analysis of extracted data was performed or a narrative synthesis of the evidence was presented. After screening 3626 articles, 50 studies involving 7088 patients were included. Overall, quality of evidence ranged from very low to low. There was no evidence of benefit for patients with no risk factors, patients with diabetes mellitus, postmenopausal women, elderly institutionalised patients, patients with renal transplants, or patients prior to joint replacement, and treatment was harmful for patients with recurrent urinary tract infection (UTI). Treatment of ABU resulted in a lower risk of postoperative UTI after transurethral resection surgery. In pregnant women, we found evidence that treatment of ABU decreased risk of symptomatic UTI, low birthweight, and preterm delivery. ABU should be treated prior to transurethral resection surgery. In addition, current evidence also suggests that ABU treatment is required in pregnant women, although the results of a recent trial have challenged this view.

Patient summary: We reviewed available scientific studies to see if people with bacteria in their urine but without symptoms of urinary tract infection should be treated with antibiotics to eliminate bacteria. For most people, treatment was not beneficial and may be harmful. Antibiotic treatment did appear to benefit women in pregnancy and those about to undergo urological surgery.

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<http://dx.doi.org/10.1016/j.eururo.2017.07.014>

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Please cite this article in press as: Köves B, et al. Benefits and Harms of Treatment of Asymptomatic Bacteriuria: A Systematic Review and Meta-analysis by the European Association of Urology Urological Infection Guidelines Panel. Eur Urol (2017), <http://dx.doi.org/10.1016/j.eururo.2017.07.014>

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