

## **RESISTANCE OF UROPATHOGENS IN VITRO AND CLINICAL OUTCOMES OF ANTIBACTERIAL THERAPY OF UNCOMPLICATED URINARY TRACT INFECTIONS**

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Community-acquired isolates of uropathogens are increasingly resistant to many of oral antimicrobials. Despite this rise, there are few data correlating clinical outcomes for urinary tract infections (UTIs) with in vitro antimicrobial resistance. Systematic review and meta-analysis of controlled trials was performed. The search via the Cochrane Register of Controlled Trials, MEDLINE, EMBASE, reference lists of articles and abstracts from conference proceedings without language restriction was carried out. Prospective trials comparing clinical and bacteriological outcomes in patients with UTI recovered susceptible and resistant uropathogens were identified. The results of 5 prospective trials were studied with metaanalysis. The trials investigated correlations between uropathogens resistance in vitro to sulphomethoxazol/trimethoprim or trimethoprim and clinical/bacterial efficacy of these drugs. In detection of a resistant uropathogen the rate of eradication of uropathogens decreases 1.81 fold (CI 1.55-2.12;  $p < 0.00001$ ), of a persistent bacteriological response 1.29 fold (CI 1.12-1.49;  $p = 0.0004$ ), of recovery--1.65 fold (CI 1.44-1.89;  $p < 0.00001$ ), persistent clinical response--1.42 fold (CI 1.16-1.74;  $p < 0.0005$ ). At present, correlation between uropathogens resistance in vitro and efficacy of antibacterial treatment of urinary infection can be estimated only for co-trimoxazol the efficacy of which in urinary infections caused by resistant uropathogens falls 1.2-1.8 fold while 45.3% patients demonstrate bacteriological and 53.2%--clinical response to therapy. We have not found study which evaluated clinical or bacteriologic outcomes for other antimicrobials (quinolones, beta-lactams, nitrofurantoin, fosfomicin). Further studies are needed for estimation of the above correlations for other groups of antibacterial drugs.