

Publication

Antibiotic prophylaxis at urinary catheter removal prevents urinary tract infections : a prospective randomized trial

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OBJECTIVE: To assess whether antibiotic prophylaxis at urinary catheter removal reduces the rate of urinary tract infections. **SUMMARY OF BACKGROUND DATA:** Urinary tract infections are among the most common nosocomial infections. Antibiotic prophylaxis at urinary catheter removal is used as a measure to prevent them, albeit without supporting evidence. **METHODS:** A prospective randomized study enrolled 239 patients undergoing elective abdominal surgery, who were randomized either for receiving 3 doses of trimethoprim-sulfamethoxazole at urinary catheter removal, or not. Urinary tract infections were diagnosed according to Center of Disease Control definitions. Urinary cultures were obtained before and 3 days after catheter removal. Subjective symptoms were assessed by an independent study-blind urologist. **RESULTS:** Patients who received antibiotic prophylaxis showed significantly fewer urinary tract infections (5/103, 4.9%) than those without prophylaxis (22/102, 21.6%), $P < 0.001$. The absolute risk reduction for the occurrence of a urinary tract infection was 16.7%; the relative risk reduction was 77.5%, and the number needed to treat was 6. Patients with antibiotic prophylaxis also had less significant bacteriuria 3 days after catheter removal (17/103, 16.5%) than those without (42/102, 41.2%), $P < 0.001$. **CONCLUSIONS:** Antibiotic prophylaxis with trimethoprim-sulfamethoxazole on urinary catheter removal significantly reduces the rate of symptomatic urinary tract infections and bacteriuria in patients undergoing abdominal surgery with perioperative transurethral urinary catheters.

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