

Silver-coated urinary catheters or not?

The following question was answered by a systematic review of the literature:
Are silver-coated catheters superior to uncoated catheters in the prevention of urinary tract infections?

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Is there evidence for recommending silver-coated urinary catheters in guidelines?

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Abstract

We evaluated the available literature on effectiveness of silver-coated versus uncoated catheters for the prevention of urinary tract infections in catheterized patients stratified by sex, systemic antibiotic use, renal function and duration of catheterization. Controlled clinical trials, randomized clinical trials and systematic reviews/meta-analysis were identified by a search strategy in Medline (1966-August 2001) and in the Cochrane Controlled Trials Register. Keywords were urinary catheterization, silver and infection. Trials using silver-coated catheters in the treatment group and uncoated catheters in the control group, with bacteriuria as the outcome measure, were selected. The quality of the methods used of all selected publications was assessed by using a quality assessment scale for randomized clinical trials. In addition we looked critically at subject-specific aspects. Data from the original publications were used to calculate the overall relative risk of bacteriuria in patients with silver-coated versus uncoated catheters, as well as the effect in subgroups. Thirteen trials and one meta-analysis were identified. Seven reports satisfied the selection criteria with only one achieving a high-quality score. Confounding variables were not considered in any trial. Additional studies with a high standard of internal quality and careful specification of the clinical question with regard to subject-specific critical points are necessary to decide whether the use of silver-coated catheters can be recommended.