153

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INTERMITTENT CATHETERISATION: DO DIFFERENT CATHETER TYPES, STRATEGIES OR TECHNIQUES AFFECT UTI?

Hypothesis / aims of study

Intermittent catheterisation (IC) is commonly used by people with incomplete bladder emptying, but urinary tract infection (UTI) is a frequent complication. In an attempt to control UTI, sterile single use catheters are often prescribed. In the UK IC catheter costs exceed £40M and the most common strategy is to use sterile, single-use, pre-lubricated (coated) catheters. This high cost approach contrasts with other countries (e.g. Canada) where uncoated catheters PVC are washed and reused by individual users. It is unclear whether different catheter types, techniques or strategies affect the incidence of UTI.

The aim of this study was to systematically review the literature to compare sterile versus clean catheterisation technique, coated (pre-lubricated) versus uncoated (separate lubricant) catheters, single (sterile) or multiple use (clean) catheters, self-catheterisation versus catheterisation by others, and any other strategies designed to reduce UTIs.

Study design, materials and methods

We searched the Cochrane Incontinence Group Specialised Trials Register (searched 2007), MEDLINE (1966 to 2007), EMBASE (1988 to 2007), CINAHL (1982 to 2007), ERIC (1984 to 2007), for randomised controlled trials comparing at least two different catheterisation techniques, strategies or catheter types.

Results

Fourteen studies met the inclusion criteria; all were small (less than 60 participants). There was considerable variation in length of follow-up (3 weeks – 12 months) and definitions of UTI. Participant drop-out adversely affected several studies, some were more than ten years old and outcome measures varied. Figure 1 depicts the 3 trials that assessed the effects of coated vs sterile single use uncoated catheters with either sterile or clean technique; Figure 2 depicts the 4 trials which assessed sterile single use vs clean multiple use PVC catheters again using either sterile or clean technique. (Figures 1 and 2). Because each study differed in design, it was not possible to group data to do meta-analysis.

Interpretation of results

Confidence intervals around estimates were wide and clinically important differences in UTI and other outcomes could neither be identified nor reliably ruled out. The results suggest that current practice requires evaluation. Many of the studies were of low quality and more than 10 years old.

Concluding message

There is a lack of evidence to state that incidence of UTI is affected by use of any particular catheter type, technique or strategy. In light of the important cost implications and infection control issues, well-designed studies are needed to inform policy.

Figure 1

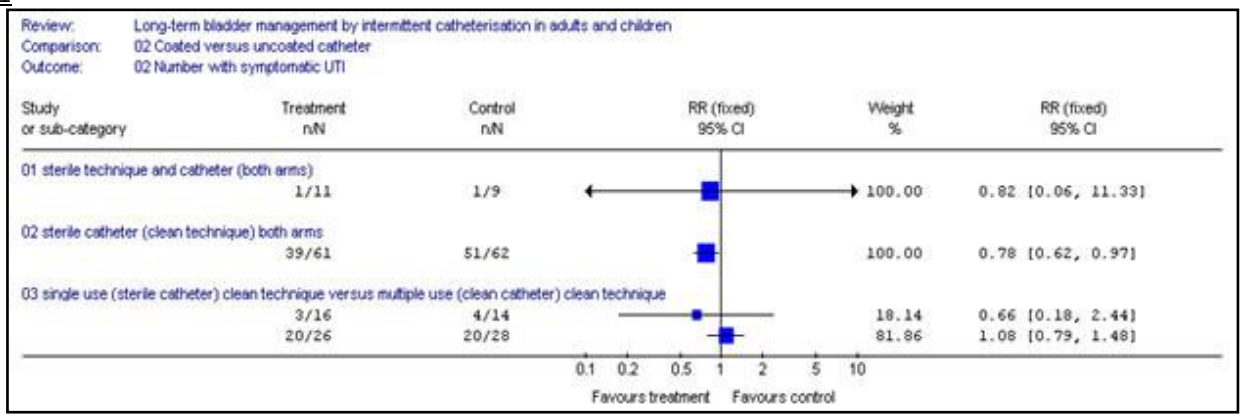
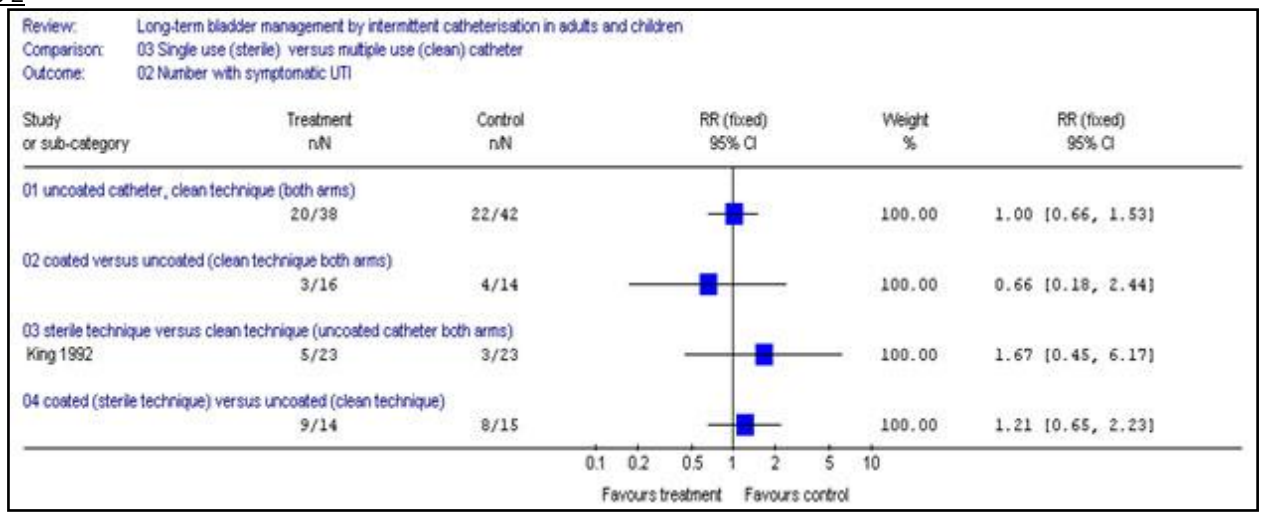


Figure 2



Specify source of funding or grant	**NONE**
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What were the subjects in the study?	**NONE**