

## **Abstract – Hjalmar Schiøtz**

Three prospective clinical studies totalling 917 women were done with a view to simplifying postoperative urinary management after gynaecological surgery.

The basic premises were (1) that 24 hour transurethral catheterisation is a safe and feasible routine regarding voiding and urinary tract infection (UTI) after such gynaecological procedures as laparotomy, vaginal plastic repair and retropubic incontinence surgery, and (2) that asymptomatic bacteriuria does not require routine treatment.

The first aim of the studies was to demonstrate that routine use of 24 hour catheterisation is safe and feasible. The second aim was to determine the rates of UTI, asymptomatic bacteriuria and voiding problems associated with 24 hour catheterisation, and to study the natural course of untreated asymptomatic bacteriuria. The third aim was to evaluate urinary prophylaxis with methenamine hippurate.

The first study (Papers I and II) evaluated postoperative voiding problems, urinary tract infections and asymptomatic bacteriuria after routine gynaecological surgery (laparotomy, vaginal surgery and Burch procedures) using 1 day Foley catheterisation. There were no significant differences between the three patient groups regarding impaired voiding and UTI, and postoperative impaired voiding was not a clinical problem. Postoperative asymptomatic bacteriuria occurred in 49% of patients, but developed into symptomatic UTI in only 15% of these women, none severe.

In the second study (Papers III-V) a prospective comparison was made of 1 and 3 days Foley catheterisation after vaginal plastic surgery (Paper III) and retropubic incontinence surgery (Paper IV), while women undergoing laparotomy were catheterised for 1 day (Paper V). There were no statistically significant differences regarding impaired voiding or UTI between the 1-day and 3-day groups in Papers III and IV. In Paper V asymptomatic bacteriuria occurred in 45% of patients and developed into symptomatic UTI in 18%, none severe.

Preoperative bacteriuria was not associated with a significantly increased risk of postoperative UTI. 36% of the patients were discharged with asymptomatic bacteriuria and 20% of these women developed UTI, none severe.

Papers II – V demonstrate that even with catheterisation of only 1 day, a considerable number of patients develop asymptomatic bacteriuria and UTI. The third study (Paper VI) was therefore done to evaluate methenamine hippurate in a prospective, randomised, placebo-controlled study of 145 women. Methenamine significantly reduced the risk of UTI and asymptomatic bacteriuria.

## ***Conclusions***

- 24-hour Foley catheterisation may be used routinely after common gynaecological procedures with a low rate of voiding problems after catheter removal
- Preoperative urine cultures do not reliably identify women at increased risk of UTI and may probably be omitted.
- Postoperative asymptomatic bacteriuria is common, but does not generally require treatment as it resolves spontaneously in about 80% of cases.
- Prophylaxis with methenamine hippurate significantly reduces the risk of postoperative UTI.
- Postoperative urine cultures are not required in asymptomatic patients.

