

POSTOPERATIVE LOWER URINARY TRACT SYMPTOMS IN OLDER ADULTS UNDERGOING HIP ARTHROPLASTY: A FEASIBILITY STUDY

Hypothesis / aims of study

Age changes and chronic conditions predispose older adults to lower urinary tract symptoms (LUTS), which may worsen during hospitalization. Although perceived as secondary issues during hospitalization, new impairments such as incontinence increase risk for adverse events post discharge.

Purpose: To describe lower urinary tract symptoms in one group of older adults through hospitalization and convalescence and to determine if there is evidence to warrant larger studies.

Research Questions:

Question 1: What is the prevalence preoperatively and incidence postoperatively of LUTS in this group of older adults?

Question 2: Is there a difference between AUASI symptom or quality of life scores, PVR urine or 24 hour pad test measured prior to surgery and post operatively?

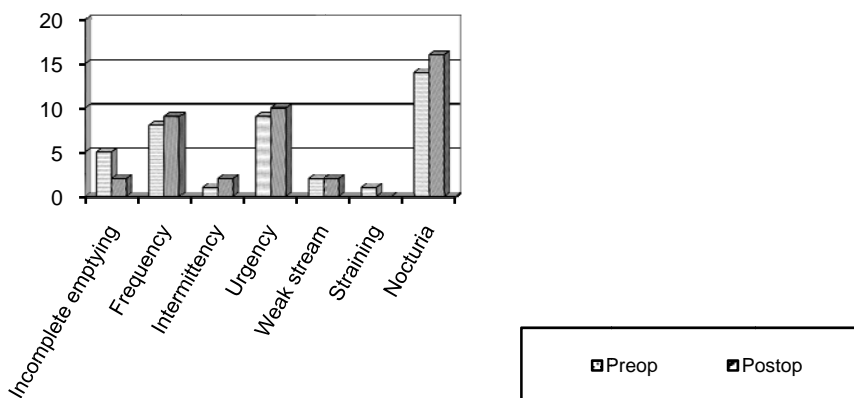
Study design, materials and methods

Prospective, observational, cohort design with measurement at two time points. Participants were recruited preoperatively, with data collected pre-hospital and at 6 weeks post operatively. A visit in hospital was also made to document any voiding related concerns in the post catheter removal period.

Results

Sixteen participants (9 males, 7 females, mean age 74 years) completed the study. Preoperatively, 15 participants reported at least one LUTS symptom. Postoperatively, all reported symptoms, although the change in mean AUASI score from 5.6 to 6.9 was not statistically significant. Postoperatively, eight participants had higher AUASI scores (increased symptoms) and of these, two had a postoperative score indicating a change to severe symptoms (from 4 and 8 preoperatively to 17 and 22 postoperatively). For three participants, increased symptoms were distressing, negatively affected urinary related quality of life, and were difficult to manage. The most common symptoms pre and postoperatively were nocturia, frequency and urgency. Of the symptoms which increased postoperatively, only nocturia approached statistical significance. Little information with regards the history of pre-existing LUTS or voiding patterns after catheter removal was documented on hospital patient records.

Figure 1: Number of participants reporting presence of specific urinary symptoms on the AUASI Score (N=16)



Mean Episodes of Nocturia

Nocturia episodes	Pre-operative	Post-operative	p*
Male			
Mean (SD)	2.11 (1.17)	2.44 (1.59)	
Median	2	2	0.41
Range	1-4	1-5	
Female			
Mean (SD)	1.71 (1.50)	2.29 (1.11)	
Median	2	2	0.10
Range	0-4	1-4	
All			
Mean (SD)	1.94 (1.29)	2.38 (1.36)	
Median	2.00	2.00	0.08
Range	0-4	1-5	

*Wilcoxon signed ranks test, 2 tailed, $\alpha = 0.05$

Interpretation of results

Not unexpectedly in this group of older adults, prevalence of LUTS was high. Of concern in the post hospital period was that half of participants experienced an increase in symptoms, and for three this increase was distressing. As well, the commonly reported symptoms were those which have been associated with falls in older persons. Little acknowledgement of the pre-existence of LUTS or assessment of lower urinary tract function in hospital was documented, possibly because LUTS were not recognized as a concern by hospital staff.

All participants in the study had been exposed to urinary catheterization in hospital as part of routine arthroplasty care. Although teaching on potential for urinary tract infection may have occurred at discharge, the participants distressed by increased symptoms did not recall any instructions related to this. All were referred to their primary care physicians for further assessment as urinary tract infection is a risk for joint sepsis post arthroplasty.

Concluding message

Worsening of LUTS (e.g. urgency and nocturia) potentially increases fall risk and therefore may be a safety concern for older adults post arthroplasty. As well, it may reflect other concerns including catheter related urinary tract infection. Larger studies are needed to determine if changes in LUTS post hospital are statistically as well as clinically significant in older adult patients.

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HUMAN SUBJECTS: This study was approved by the University of Alberta Health Research Ethics Board and followed the Declaration of Helsinki Informed consent was obtained from the patients.