Post Operative Voiding Dysfunction in Older Adults Undergoing Hip Arthroplasty: Symptoms and Risk Factors

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*Research in progress

Background: New impairments in hospital, such as incontinence, increase risk for post discharge problems such as poor mobility, readmission or even death. A seemingly secondary issue such as lower urinary tract symptoms (LUTS) may affect patient outcomes. Worsening LUTS (e.g. urinary retention or incontinence) are potential issues for older adults undergoing hip arthroplasty due to age changes and chronic conditions. To date, research on voiding function post hip arthroplasty has focused on short term post op management. Further understanding of voiding dysfunction in this population is needed to enhance symptom management support throughout the post surgery and convalescent periods.

Research Questions:
1. What is the prevalence pre op and incidence post op of voiding dysfunction, in older adults undergoing elective hip arthroplasty prior to surgery and at 6 weeks post operatively?
2. Is there a difference between AUASI symptom or quality of life scores, PVR urine or 24 hour pad test measured pre op and at 6 weeks post op?
3. What risk factors are associated with voiding dysfunction in the peri-operative and convalescent periods?

Methods:
Design: Prospective, observational, cohort design with measurement at two time points.
Sample: Males and females 65 years and older recruited from elective hip arthroplasty patients from a large urban hospital.
Inclusion Criteria: 65 years and older; English speaking; Living within the Edmonton area, MMSE 24 or >
Setting: Participant homes and orthopedic wards.
Recruitment, data collection, instrumentation: (at left)

Literature Review: Urinary function includes storage and emptying phases. Emptying (voiding) requires coordination of detrusor contraction and outlet relaxation. Failure to store involves decreased outlet resistance (e.g. laxity of the pelvic floor/hypermobility of the urethra) or increased detrusor pressure (e.g. detrusor overactivity from neurological injury such as stroke, dementia or PD). Failure to empty arises with increased outlet resistance (e.g BPH or urethral compression) or decreased activity of the detrusor (e.g. diabetic cystopathy or medication effects). In older persons, failure to store and empty can coexist. Age related changes in voiding function include a decline in bladder contractility, reduced bladder capacity and increased post void residual urine.

Purpose of the Study: To identify the incidence of and risk factors for voiding dysfunction in older adults undergoing hip arthroplasty. This will assist health care professionals to anticipate potential voiding dysfunction in older adults, and in planning for discharge care and follow-up services in the community.

References

To date: 16 participants enrolled.

Acknowledgements: Scholarship support for KF Hunter was received from the Gyro Club of Edmonton and the Alberta Registered Nurses Educational Trust.