

## FACTORS PREDICTING SUCCESS OR FAILURE IN PATIENTS WITH ACUTE URINARY RETENTION WHO PRESENT FOR TRIAL WITHOUT CATHETER

### Hypothesis / aims of study

Acute urinary retention (AUR) is a common urological presentation with 1 in 10 men in the eighth decade of life experiencing an episode within 5 years<sup>(1)</sup>. Patients are often treated initially by urethral catheterisation followed by trial removal of catheter after 3-7 days. The aim of this study was to identify risk factors which may predict success or failure in patients with acute urinary retention who present for trial without catheter (TOV).

### Study design, materials and methods

A review of a prospectively collected database of patients presenting to the TOV clinic at a tertiary referral hospital over a 5 year period was carried out. Voiding function following catheter removal was assessed by 2 urinary flow studies and residual urine measurements over 4-6 hours. The endpoint was whether a catheter was replaced before discharge from the clinic.

### Results

578 patients with urinary retention attended the TOV clinic of which 551 were male (mean age 73, range 40-93 yrs). 253 patients had retention following surgery. 300 male patients presented for trial of void following a first episode of AUR. 64% of patients had a successful TOV. Receiver operating characteristic (ROC) plot analysis showed factors predicting failure of TOV include age over 75 (Odds Ratio 1.6, p=0.045), initial residual over 1000mls (OR 3.0, p=0.003) and elevated residuals post catheter removal. A residual after the first void post catheter removal greater than 140mls was predictive of failure (OR 11.7, p=0.001). A residual at second void post catheter removal greater than 170mL was also predictive of failure (OR 15.3, p = 0.001) 174 patients were commenced on Tamsulosin at least 5 days prior to TOV and there was no difference in outcome (p=0.14).

### Interpretation of results

Results of our study are in line with that of the Reten World Survey<sup>(2)</sup>, with age and initial residual volume being two factors related to trial of void outcome. Our results showed that about 2/3 patients with a first episode of AUR will have a successful TOV. An elevated postvoid residual of over 170mls was associated with a significantly increased chance of eventual failure requiring reinsertion of catheter.

### Concluding message

Patients presenting with AUR who are initially treated with urethral catheterization have approximately 60% chance of successful TOV. Risk factors predicting unsuccessful outcome include age>75 years, initial residual >1 litre and residual urine of over 170mL after a second void following removal of catheter.

### References

1. Emberton M, Anson K. Acute urinary retention in men: an age old problem. BMJ, 318: 921, 1999
2. Emberton M, Fitzpatrick J. The Reten World Survey of the Management of Urinary Retention : Preliminary Results. BJUI 2008: Suppl 3 : 27 - 32

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<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Concord Repatriation General Hospital Human Research Ethics Committee
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes