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\(^1\). 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\(^2\), 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 170mL 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