

## PREDICTORS OF SUBVESICAL OBSTRUCTION IN MEN WITH ACUTE URINARY RETENTION: WHEN IS SURGERY INDICATED?

### Objective:

To find predictors for the probability of successful trial without catheter and the necessity of surgery after acute urinary retention.

### Study design:

We prospectively evaluated 91 consecutive men who presented with the first episode of acute urinary retention. None had a history of surgery of the lower urinary tract and small pelvis, or neurologic disorders. All patients underwent catheter removal within 24 hours and were subsequently evaluated by pressure-flow studies. Age, medical history, volume of retention, lower abdominal pain during retention, Qmax and post-void residual volume were evaluated as potential predictors of obstruction. Associations with subvesical obstruction according to the Schaefer classification and the Bladder Outlet Obstruction Index (BOOI) were assessed.

### Results:

Mean age and mean retention volume (+/- SD) were 71.9 +/- 11.6 years and 918 +/- 547 ml, respectively. 42 patients (51.2%) had lower abdominal pain during retention. After catheter removal, mean Qmax (+/- SD) was 2.8 +/- 3.5 ml/sec, and mean post-void residual volume was 253 +/- 203 ml. Catheter removal was successful in 29 patients (35.4%), of which 16 (55.2%) were obstructive in PFS. The mean Bladder Voiding Efficiency (BVE) was 27%. The only parameter that was associated with successful catheter removal was age: with each year increase, the probability of successful catheter removal decreased by 5.1% (OR 0.949, p=0.018). In multivariate analysis, parameters associated with obstruction in PFS included Qmax (OR 0.692, p<0.001) and the percentage of voided urine (OR 1.04, p=0.035). A nomogram was created that included Qmax and BVE at first catheter removal trial, age, volume of retention, lower abdominal pain during retention, and concomitant diabetes that predicted subvesical obstruction with an accuracy of 72.1%.

### Conclusion:

Measurement of Qmax and residual volume after catheter removal trial following acute urinary retention may indicate the need for immediate deobstructive surgery. A nomogram was created that may assist in clinical decision making with these patients. Successful catheter removal does not rule out obstruction. Older men are more likely to have an unsuccessful catheter removal trial.

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<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>No</b>
<b>This study did not require ethics committee approval because</b>	<b>Retrospective study</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>