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## Additional benefit of 5 alpha-reductase inhibitor in men who failed trial without catheter with alpha blocker monotherapy

NS Yeung, KY Ko, KM Li, CK Ng, YS Chan, CH Cheng  
Division of Urology, Department of Surgery, Tuen Mun Hospital

### Introduction

Alpha blocker was shown to improve successful trial without catheter (TWOC) rate in patients with 1<sup>st</sup> episode of spontaneous acute retention of urine (AROU) related to BPH. However, the effect of 5 alpha reductase inhibitor (5-ARI) to increase likelihood of TWOC is not well studied. This study aims to evaluate the additional benefit of 5-ARI in men who failed TWOC with alpha blocker alone.

### Method

This is a retrospective study evaluating 387 men attending the TWOC clinics at Tuen Mun Hospital and Pok Oi Hospital between 1 September and 30 December in 2024. Among them, 50 patients who failed TWOC with alpha blocker monotherapy were treated with an adjunctive 5-ARI and underwent another TWOC.

### Characteristics

Mean age	75
DM	27 (33%)
Neurological disease	19 (23%)
Mean first catheterized volume	560 mL
Median serum PSA level	4.6 ng/ml
Mean prostate size by transrectal ultrasound	77 cc
Duodart	25 (50%)
Alpha blocker with finasteride	25 (50%)

### Results

32 (64%) patients achieved successful TWOC after initiating 5-ARI, with an average treatment duration of 78 days. 25 patients received finasteride in addition to pre-existing alpha blocker while 25 patients switched to Duodart. Factors such as an older age (> 65 years old), large initial catheterized urine volume ( $\geq 1$  liter), history of urinary retention, higher serum PSA level ( $\geq 2.4$  ng/ml) and larger prostate size ( $\geq 50$  cc) showed no statistically significant association with TWOC success ( $p = 0.5$ ,  $p = 0.071$ ,  $p = 0.72$ ,  $p = 1$ ,  $p = 0.75$  respectively).

Comorbidities including diabetes and neurological disease also showed no statistically significant association ( $p = 1$  and  $p = 0.7$  respectively).

There was also no statistical difference between the use of Duodart or alpha blocker with finasteride with successful TWOC ( $p = 0.077$ ).

9 (18%) patients with successful TWOC experienced recurrent urinary retention within 1 year and 5 (10%) patients eventually required surgery for benign prostatic hyperplasia (BPH) within 1 year.

### Limitations

This is a retrospective cohort study with small sample size. Mean prostate size after starting 5-alpha-reductase inhibitor was not assessed. Future research with prospective studies may provide more reliable insights.

### Conclusion

5-alpha reductase inhibitor may provide additional benefit in men who failed TWOC with alpha blocker alone while waiting for surgery. However, no significant clinical predictors for successful TWOC following 5-ARI treatment were identified in this study.