



Abstract #564

# Prophylactic Antibiotics in High-Risk Patients for Post-Urodynamic Urinary Tract Infections: A Retrospective Cohort Study

ICS-EUS 2025  
ABU DHABI



Chien-Hsiung Lo, Yu-Hsuan Chen, Yin-Chien Ou  
Department of Urology, National Cheng Kung University Hospital, Taiwan

## Introduction

Multichannel urodynamic studies are key for assessing lower urinary tract dysfunction but carry a 1–20% risk of post-procedural urinary tract infection

2017 Best Practice Policy Statement (BPPS) on Urodynamic Antibiotic Prophylaxis advises against routine prophylaxis in “index” patients

The benefit of prophylactic antibiotics in “non-index” patients with high-risk characteristics remains uncertain

**AIM** Evaluate if prophylactic antibiotics reduce post-UDS UTIs, especially in patients with high-risk features.

## Methods



### Exclusion Criteria

Patients receiving UDS between August 2021 and November 2024

Incomplete documentation of key parameters  
Receiving antibiotics for non-UTI indications  
Urological procedures within 30 days before or after UDS

### Definition of UDS parameters

Detrusor underactivity as BCI <100  
Bladder outlet obstruction as BOOI >40  
Poor bladder compliance as <20 ml/cmH<sub>2</sub>O  
Elevated PVR as >100ml.

Primary outcome as occurrence of **symptomatic, culture-proven UTI within 30 days following UDS**

The use of antibiotics was limited to non-index patients or determined through shared decision-making

## Result

### Unadjusted comparison analysis of 432 patients

	No UTI (N=386)	UTI (N=46)	p value
<b>Baseline characteristics, N (%)</b>			
Age>70	248 (64.3%)	31 (67.4%)	0.739
Sex (Male)	260 (67.4%)	35 (76.1%)	0.229
DM	115 (30.4%)	16 (35.6%)	0.727
<b>Catheterization</b>			
Immunosuppression	17 (4.4%)	3 (6.5%)	1.000
<b>Recurrent UTI</b>			
Recent UTI	45 (11.7%)	16 (34.8%)	<0.001
<b>NLUTD</b>			
Prophylactic antibiotics	200 (51.8%)	28 (60.9%)	0.276
<b>Multichannel urodynamic parameters, N (%)</b>			
<b>Elevated PVR</b>			
Detrusor underactivity	251(65%)	33 (71.7%)	0.401
Bladder outlet obstruction	121 (31.6%)	18 (39.1%)	0.285
Poor compliance	104(26.9%)	12 (26.1%)	0.901

Note: % is expressed as the percentage of UTI or No UTI group  
UTI, urinary tract infection; NLUTD, Neurogenic lower urinary tract dysfunction; PVR, post void residual

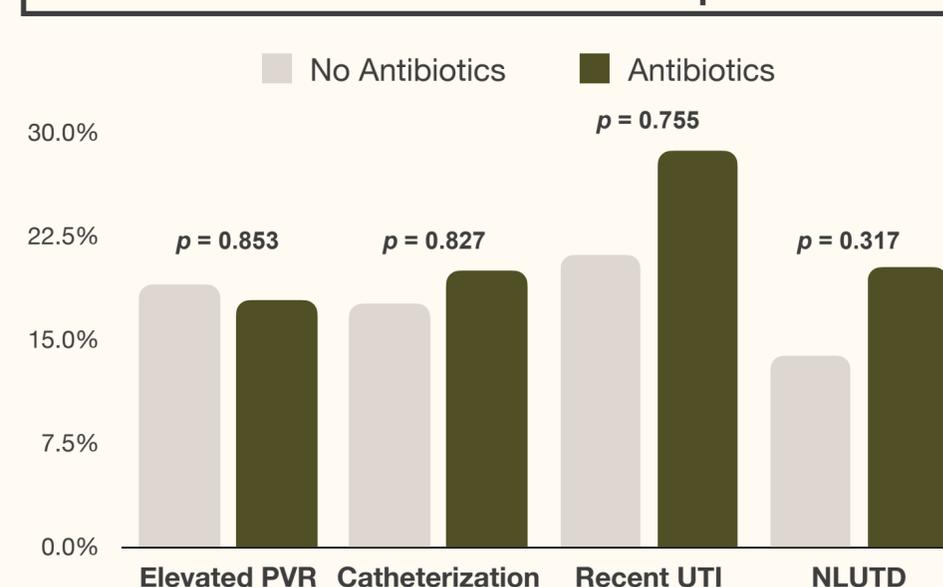
### Logistic regression analysis

	Multivariate	OR (95% CI)	p value
<b>Independent predictors for post-UDS UTI</b>	Recent UTI	2.87 (1.37-6.00)	0.005
	NLUTD	2.67 (1.36-5.25)	0.004
	Recurrent UTI	1.52 (0.53-4.41)	0.439
	Catheterization	2.45 (1.25-4.78)	0.009
	Elevated PVR	4.01 (1.88-8.57)	<0.001
	Prophylactic antibiotics	1.059 (0.54-2.10)	0.870

NLUTD, Neurogenic Lower Urinary Tract Dysfunction; UTI, Urinary Tract Infection; PVR, Post-void Residual

## Result

### UTI incidence in “non-index” patients



Prophylactic antibiotics did not reduce UTI incidence in patients with any of the identified risk factors

## Conclusion

Recent UTI, NLUTD, elevated PVR and catheterization are significant risk factors for post-UDS UTI. However, prophylactic antibiotics did not demonstrate protective efficacy among the high-risk patients.