#329 UNDERACTIVE DETRUSOR
DIFFERENT WAYS OF DIAGNOSING AN UPCOMING CONDITION

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INTRODUCTION

Detrusor underactivity (DU) is a prevalent condition, affecting up to 48% of men under 70 years old and 12-45% of elderly women[1].

Its etiopathogenesis remains to be understood completely, however we know it may be a consequence of a *neurogenic* or a *non-neurogenic* insult[2].

A variety of non-validated *urodynamic criteria* have been proposed to diagnose detrusor underactivity, such as[2]:

- ♀ / ♂ - BCI<100
- ♀ - BVE<90% + $P_{det}Q_{max}$ ≤20 + Q_{max}<15ml/s
- ♂ - BVE<90% + BOOI <20

Nonetheless, these criteria are not validated yet.

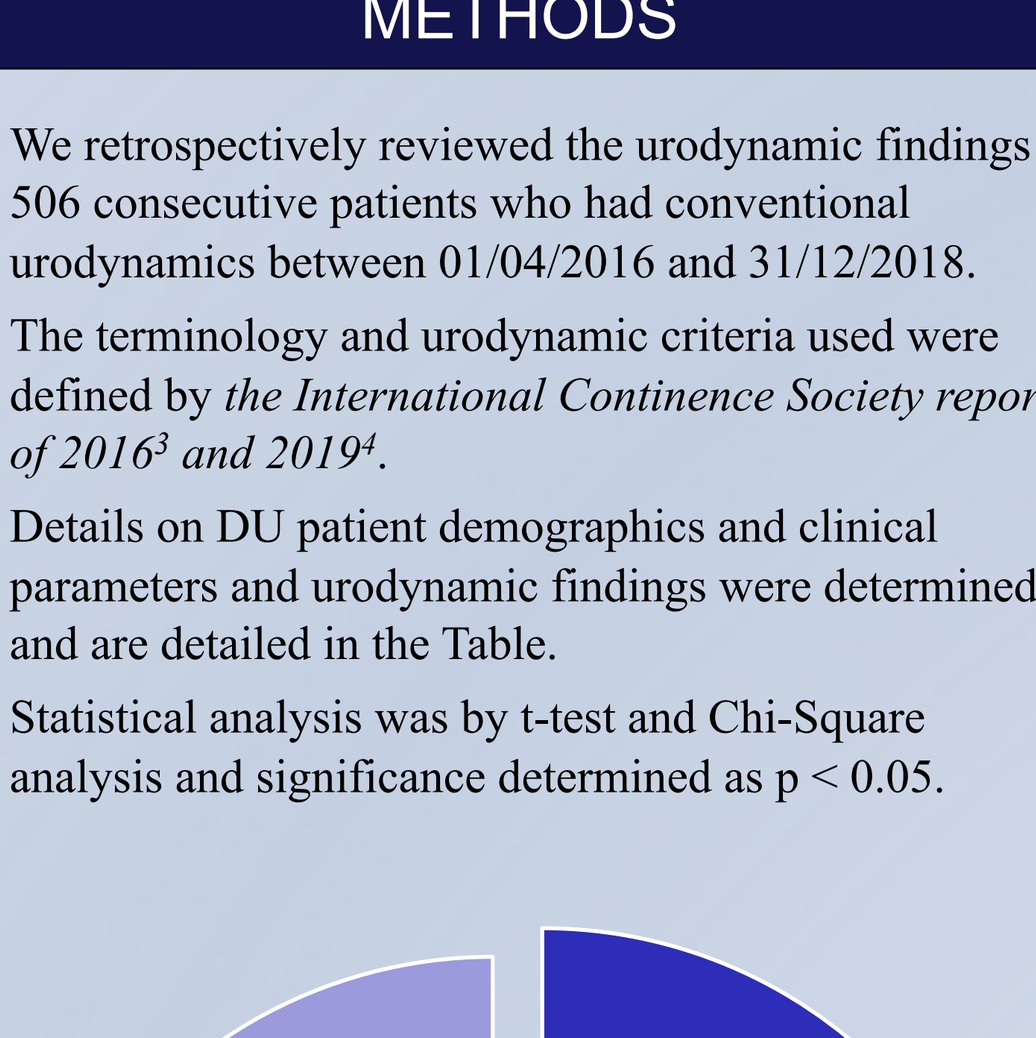
OBJECTIVES

1. Access the accuracy of different sets of *urodynamic criteria to diagnose* the prevalence of DU in a sample of patients with refractory lower urinary tract symptoms.

2. Access the correlation between the DU diagnosis and its associated risk factors described in literature (age, Diabetes *Mellitus*, neurological disorders and iatrogenesis).

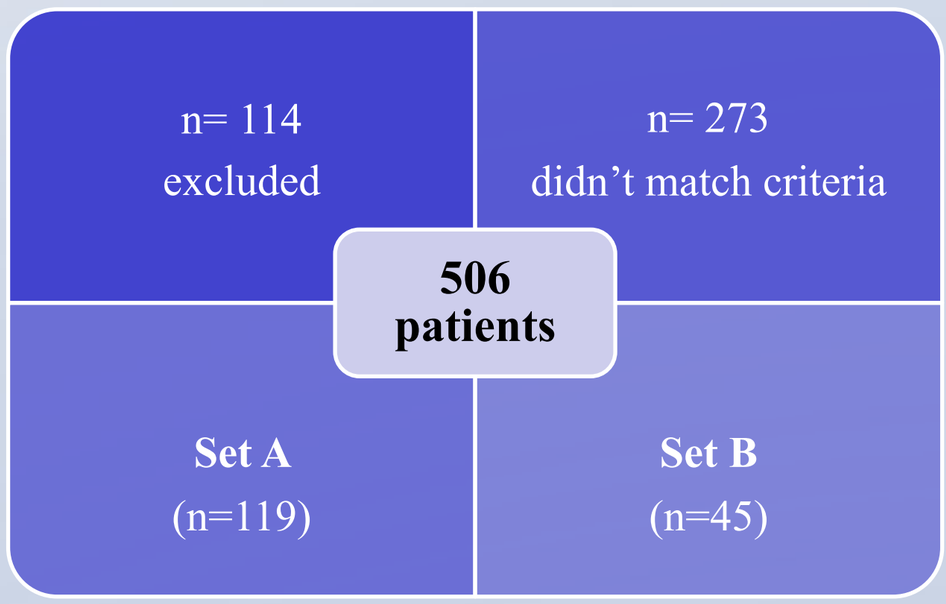
METHODS

- We retrospectively reviewed the urodynamic findings in 506 consecutive patients who had conventional urodynamics between 01/04/2016 and 31/12/2018.
- The terminology and urodynamic criteria used were defined by *the International Continence Society reports of 2016[3] and 2019[4]*.
- Details on DU patient demographics and clinical parameters and urodynamic findings were determined and are detailed in the Table.
- Statistical analysis was by t-test and Chi-Square analysis and significance determined as $p < 0.05$.



BCI: Bladder contractility index
BOOI: Bladder outlet obstruction index
$P_{det}Q_{max}$: Detrusor pressure at maximum urinary flow rate
Q_{max}: Maximum urinary flow rate
BVE: Bladder voiding efficiency

RESULTS



Parameters	Set A		Set B	
	♂	♀	♂	♀
Age (years)	71,89	65,94	74,67	68
Diabetes *Mellitus*	52,63	14,14	16,67	15
Parkinson's Disease	21,05	4,04	16,67	2,50
Spinal cord lesion	15,79	18,18	33,33	20
Past urological surgery	47,37	7,07	33,33	37,50
TCAs	0	6,06	0	12,50
Opioids	10,53	24,24	16,67	20
SSRIs	15,79	12,12	16,67	15
Stress incontinence	15,79	10,10	16,67	47,50
Urge incontinence	36,84	43,43	50	77,50
Straining	21,05	28,28	16,67	15
Q_{max} (ml/s)	7,58	9,22	6,67	8,12
Post-void residuals (ml)	45,11	68,27	142,33	98,68
BVE	84,72	81,65	51,88	58,94
BCI	58,84	61,44	58,50	58,84
BOOI	4,37	-	10,67	-

BCI: bladder contractility index
BOOI: bladder outlet obstruction index
BVE: bladder voiding efficiency
Q_{max}: maximum urinary flow rate
SSRIs: selective serotonin reuptake inhibitors
TCAs: tryciclic antidepressants

INTERPRETATION OF RESULTS

- DU affects a considerable proportion of patients referred to our tertiary referral functional urology unit.
- Sets A and B have different prevalence rates but still present the same demographic and urodynamic characteristics.
- Women with DU were younger, had less comorbidities than men, and higher rates of urgency symptoms and urinary incontinence.

CONCLUSIONS

- There is **no significant statistical difference** in clinical or urodynamic patients' characteristics when using different urodynamic criteria to diagnose DU or regarding their treatment.
- **Set B criteria narrowed the number of patients** labeled with DU which might reduce the number of patients treated.
- A *standardized* urodynamic definition of DU is needed.

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