University College London Hospitals
NHS Foundation Trust

uclh

The Aetiology of Detrusor Underactivity

Kocadag H, Trimboli M, Axell RG, Pakzad MH, Hamid R, Ockrim JL, Greenwell TJ.
Female, Functional and Restorative Urology Unit, UCLH NHS Foundation Trust, UK

Hypothesis / aims of study

- Detrusor underactivity (DU) occurs in 9-48% of the population depending on age, sex and definition. We assessed the incidence and possible causes of DU in men and women having a urodynamic assessment at our institution for refractory lower urinary tract symptoms in a 20-month period.

Study design, materials and methods

- We reviewed the urodynamic diagnosis and possible aetiology of all 1256 (510 male) patients attending for videourodynamics and simple urodynamics for the above indications between 31/5/16 and 3/1/18.
- Detrusor underactivity was defined as per 2002 ICS definition.
- Details on DU patient demographics and past medical and surgical history were determined and are detailed in the Table.
- Statistical analysis was by T-Test and Chi-Square analysis and significance determined as $P < 0.05$.

Results

- 101 (50 male) patients were excluded for trace or test quality issues.
- Of the remainder 440 (38%) had DU; 38% (176) of men and 41% (264) of women (Table).

Parameter	Male		Female	
	Neuropath	Non-Neuropathic	Neuropath	Non-Neuropathic
Number (%)	9 (2)	167 (38)	61 (14)*	203 (46)
Age (Median/Range)	51.5 (34-71)	65 (21-89)*	54 (16-84)	53 (17-87)
Post SUI/POP Surgery	0	0	2 (3)	45 (22)
Post Pelvic Surgery	0	0	2 (3)	36(18)
Post Pelvic Radiotherapy	0	0	1 (2)	3 (1)
AUS In Situ	0 (0)	9 (5)	1 (2)	4(2)
Intermittent Self Catheterisation	1 (25)	14(8)	9 (15)	22(11)
Suprapubic Catheter	0 (0)	45(3)	3(5)	0 (0)
Post Botox	1 (12.5)	2 (1)	1(2)	2 910
Radical Prostatectomy	0 (0)	60 (36)	0	0
Enterocystoplasty	0 (0)	0	0	2 (1)

*P < 0.05; SUI = stress urinary incontinence; POP = pelvic organ prolapse AUS = artificial urinary sphincter

Interpretation of Results

- Neuropathic DU was significantly more common in women.
- Non-neuropathic women with DU were significantly younger than their male equivalents.
- Risk factors for non-neuropathic DU include previous SUI, POP or pelvic surgery in women and prior radical prostatectomy in men.

Conclusion

- Detrusor underactivity was demonstrated in 38% of our patient population.
- Neuropathic DU was significantly more common in women.
- Risk factors for non-neuropathic DU include previous SUI, POP or pelvic surgery in women and prior radical prostatectomy in men.