

RELATIONSHIP BETWEEN URINARY INCONTINENCE SYMPTOM DIAGNOSIS AND URODYNAMICS DIAGNOSIS. IS IT THE TIME TO REVISIT NICE AND RECENT TRIALS RECOMMENDATION?

Hypothesis / aims of study

The use of urodynamics (UDS) studies before stress incontinence surgery has been challenged by two recent studies (1,2). NICE did not recommend the routine use of UDS for clearly defined diagnosis of pure stress incontinence(3) The value of urodynamics studies remains a topic of debate. Although Agur et al (4) had found only 5.2% women had pure stress incontinence and the sensitivity of the symptomatic assessment is very low (11.4%),the evolving consensus is that UDS are not required routinely before surgery for women with pure stress incontinence.

This study aims to correlate patient symptoms with urodynamics diagnosis and to see whether this alters the management of patients based on urodynamics.

Study design, materials and methods

This is a retrospective review of 10,670 women with lower urinary tract symptoms (LUTS) from an electronic database at a tertiary referral Centre. The database was used to identify patients aged 18-80 years who had multichannel cystometry over a period of 20 years (1991-2013). The symptoms were classified into three groups- 1. Pure stress incontinence(SUI) 2. Overactive bladder symptoms (OAB) 3. Mixed storage symptoms. The symptomatic diagnosis was then correlated with the urodynamics diagnosis and sensitivity, specificity, positive and negative predictive values were calculated using contingency tables.

Results

A total of 10,670 women were included with complete data. Only 1196 (11.2%) women presented with pure stress incontinence. Out of this 659 (55%) women had urodynamic stress incontinence (USI), while 81(6.7%) women had detrusor overactivity incontinence (DOI) and 380(31.7%) women had normal studies (table 1). Majority (8248) of women presented with mixed symptoms of OAB and stress incontinence (table 2). 1226 women presented with OAB symptoms and only 137 women had DOI (11.17%) while 71% of this group had USI (table 3). The sensitivity, specificity, positive and negative predictive values is shown in table 4

Interpretation of results

Tables –

Table1- UDS diagnosis in women with pure stress incontinence

TOTAL	1196
DOI	81
USI	659
Normal	380
USI +DOI	76

Table 2- UDS diagnosis in Women with Overactive bladder symptoms- 1226/10,725

TOTAL	1226
DO +DOI	2+135
USI	873
NORMAL	167
MIXED	49

Table 3- UDS in women with mixed symptoms

TOTAL	8248
DO	1, 043
USI	3927
NORMAL	2424
USI +DO	729

Original presenting symptom	Urodynamic diagnosis	Positive predictive value (PPV)	Negative predictive value (NPV)	Sensitivity	Specificity
Stress	USI	0.59	0.65	0.65	0.58
	DOA	0.07	0.83	0.15	0.69
	Mixed incontinence	0.05	0.92	0.23	0.71

	No incontinence	0.31	0.61	0.25	0.67
Urge	DOA	0.01	0.87	0.17	0.81
	USI	0.71	0.58	0.15	0.94
	Mixed incontinence	0.03	0.92	0.05	0.89
	No incontinence	0.13	0.63	0.03	0.86
	Mixed incontinence	0.1	0.95	0.66	0.55
Mixed	USI	0.43	0.54	0.45	0.52
	DOA	0.15	0.87	0.53	0.54
	No incontinence	0.3	0.62	0.41	0.5
	USI	0.08	0.49	0.02	0.75
Voiding difficulty	DOA	0.21	0.87	0.23	0.86
	Mixed incontinence	0.01	0.91	0.04	0.80
	No incontinence	0.67	0.71	0.29	0.92

Table 4 showing Positive , Negative predictive value, sensitivity and specificity

Concluding message

Urodynamics studies are so far the best diagnostic tool to provide comprehensive assessment of bladder and urethral function. Our study demonstrated that symptomatic diagnosis does not correlate well with the urodynamics diagnosis. The symptoms are very unreliable and patients can end up having the wrong treatment. This study demonstrates that UDS should be mandatory before embarking on any surgical treatment even in women with pure stress incontinence.

References

1. N Eng J Med,2012;366:1987-1997
2. .Neurourol Urodyn.2012;31:1118-1123
3. NICE clinical Guideline CG171 2013

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** NONE