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Authors: °A.Cucchi, °E.Omela, *M.P.Achilli, *N.Arrigoni,*G.Chiappano, *M.Boselli, °D.Porru, °B.Rovereto.
Institution: °Divisione di Urologia-IRCCS Policlinico S.Matteo-Pavia-*Fondazione S.Maugeri IRCCS Istituto Scientifico di Montescano

Title: THE IMPACT OF URGE SEVERITY ON STRESS URETHRAL PRESSURE PROFILEIN WOMEN WITH MIXED (STRESS +URGE) URINARY INCONTINENCE

Aim of Study:

In women with mixed urinary incontinence, to check whether and which would be the impact of urge severity on abdominal pressure transmission to the urethra, namely, on the pressure transmission rate (PTR) at stress urethral pressure profilometry (UPP).

Patients and Methods:

We studied 30 women with stress urinary incontinence (SUI) and a phasic-like detrusor instability (1) who had been assessed urodynamically during the period Jan. 1997-June 1998 by sitting medium fill water cystometry (CMG) with a dual lumen 6F Nelaton transurethral catheter, pressure/flow study (PFS), and supine rest and stress (cough) UPP with a 7F microtransducer catheter. All women had grad 2 cystocele and type IIA and grade 1 SUI (2,3), with a maximum urethral closure pressure of >30 cm H2O and a Valsalva leak point pressure of >90 cm H2O (3).

Voiding urgency, defined by a sense of imminent leakage accompanying a strong desire to micturate, was felt by all patients. The urge severity, referred to the month preceding our examination and assessed through particularly accurate history taking, was defined by the delay time of urgent void, i.e., the time (in minutes) for which an urgent void could be delayed (the lesser the time the higher the urgency). Two age-matched groups of 15 patients each were identified who had different voiding symptoms with unrelevantly different findings at CMG and PFS. Group 1 showed >1 void every 2 hours daily, accompanied by urgency more than half of the times, nocturia, and at least 1 urge incontinence (UI) episode during the preceding month.

Group 2 showed <1 void every 2 hours daily, accompanied by urgency less than half of the times, no nocturia and no UI. For each group we assessed, in particular, the delay time of urgent void and the mean PTR. This latter was calculated by summing up the PTRs determined for each cough in a stress UPP and dividing by the number of coughs. Each patient had both parameters measured in duplicate and the mean value considered for analysis. Differences were checked for significance by the Wilcoxon rank sum test.

Results:

The results are reported in the following Table as means, standard deviations and medians (in brackets).

	Group 1	**Group 2**	**p value**
Delay time	2+1 (2)	7+3 (5)	<0.001
Mean PTR	58+7 (58)	72+12 (75)	<0.001

Discussion:

Compared to Group 2, the patients with increased urge severity (Group 1) had a lower mean PTR at unchanged SUI type and grade. Such a finding might be amenable to pelvic floor muscle fatigue because of increased urge severity.

Indeed, the higher the urgency the stronger presumably the reflex pelvic floor contraction in response to the same urgency, thus, the higher eventually the chance for muscle fatigue. As the pressure transmission mirrored by PTR would likely involve not only a passive mechanical effect, but also a reflex contractile response of the pelvic floor muscles to stress, then the same PTR might be upset by y factor, such as increased urgency, able to increase muscle fatigue.

Conclusions

In women with mixed urinary incontinence, a reduced mean PTR may not reflect a (final, anatomical condition of) worsened urethral competence, but an (even transient pelvic floor muscle fatigue related to) increased urge severity.

References:

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