360 Clinical and urodynamic findings in women affected by mixed urinary incontinence

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<u>Giannantoni A.G.¹</u>, Gubbiotti M.², Balzarro M.³, Rubilotta E.³, Montibeller N.¹, Balsamo R.⁴, Pastore A.⁵, Carbone A.⁵, Mancini V.⁶, Finazzi Agrò E.⁷, Carrieri G.⁶, Bini V.⁸

¹University of Siena, Dept. of Medical and Surgical Sciences and Neurosciences, Functional and Surgical Urology Unit, Siena, Italy, ²Serafico Institute, Assisi, Italy, ³University of Verona, Dept. of Urology, Verona, Italy, ⁴Monaldi Hospital, Dept. of Urology, Napoli, Italy, ⁵University of Roma , Dept. of Medical and Surgical Sciences and Biotechnologies, Urology Clinic, Roma, Italy, ⁶University of Foggia, Dept. of Medical and Surgical Sciences, Foggia, Italy, ⁷Tor Vergata University Hospital, Unit for Functional Urology, Roma, Italy, ⁸University of Perugia, Dept. of Medicine, Perugia, Italy

Introduction & Objectives: The definition of mixed urinary incontinence (MUI) of the International Continence Society exclusively assesses patient-reported symptoms without consideration of physical and urodynamic results, what is inadequate to reliably predict the pathophysiology of the underlying pathology. We investigated and compared clinical and urodynamic findings in women with MUI and assessed predictive variables for the different MUI clinical presentations.

Materials & Methods: In a national, multicentre, prospective study (Ethics Committee approval obtained), women presenting with a clinical history of MUI were classified into 3 sub-groups: Stress-predominant or urge-predominant MUI (S-MUI; U-MUI) or MUI with equal symptoms' presentations (E-MUI) and underwent physical examination, the 3-day voiding diary and urodynamics. Clinical subjective and objective findings of the 3 sub-groups were compared with the underlying urodynamic dysfunction. A multivariate, logistic, regression analysis was applied to identify predictive variables for the 3 MUI sub-groups.

Results: 144 women were evaluated: 74 presented with S-MUI, 67 with U-MUI, 3 with E-MUI (the latter were excluded from the analysis). Table 1 shows the results of the comparison on clinical history and urodynamic findings between S-MUI and U-MUI sub-groups.

| Table 1. | Urodynamic diagnosis | | | | | |
|------------------|----------------------|--|-----------------------------|-------------------------------|-------------|--|
| Clinical history | Pts No. (%) | Detrusor overactivity + urodynamic SUI | Detrusor overactivity alone | y aloneUrodynamic SUI aloneNo | | |
| | | Pts No. (%) | | Pts No. (%) | | |
| | | | Pts No. (%) | | Pts No. (%) | |
| S-MUI | 74 (51.4%) | 34 (46%) | 7 (9.4%) | 21 (28.4%) | 12 (16.2%) | |
| U-MUI | 67 (46.6%) | 37 (55%) | 14 (21%) | 4 (6%) | 12 (18%) | |
| p level | - | 0.351 | 0.095 | 0.001 | 0.966 | |

Daytime and night-time urinary frequency, maximum pressure of uninhibited detrusor contractions, opening detrusor pressure and detrusor pressure at maximum flow rate were significantly higher in U-MUI, while the no. of daily pads and maximum cystometric capacity were significantly higher in S-MUI. The clinical and urodynamic predictive variables for the 2 MUI sub-groups are showed in Table 2.

| Table 2. | | | | | | | |
|----------------------------------|-------|----------|-------|---------|--|--|--|
| | 0.0 | 95% C.I. | | | | | |
| Predictive variables | 0.R. | Lower | Upper | p-value | | | |
| S-MUI | | | | | | | |
| Urethral hypermobility | 0.436 | 0.197 | 0.966 | 0.041 | | | |
| Positive provocative Stress Test | 0.317 | 0.131 | 0.768 | 0.011 | | | |
| Maximum cystometric capacity | 0.994 | 0.990 | 0.998 | 0.003 | | | |
| Positive VLPP test | 0.333 | 0.142 | 0.778 | 0.011 | | | |
| U-MUI | | | | | | | |
| Nocturia | 1.287 | 1.001 | 1.66 | 0.05 | | | |

Conclusions: Confounding clinical sign/symptom combination can be found in women with MUI. Clinical history alone corresponds to the supposed, underlying coexistence of detrusor overactivity with urodynamic SUI in only about half of cases. Objective physical findings can help confirming the clinical diagnosis of S-MUI. Urodynamics appears to be of a great value to investigate patients with MUI.