

URINARY SYMPTOM PROFILE IN EARLY MULTIPLE SYSTEM ATROPHY

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OBJECTIVE

Evaluate the Urinary Symptom Profile (USP) in a cohort of patients with early-stage MSA.

BACKGROUND

Multiple System Atrophy (MSA) is a progressive neurodegenerative disease that presents with motor and autonomic symptoms. Urinary symptoms can occur at any time during the disease process; however, no study has carefully characterized patient reported urinary symptoms in MSA with the USP.

The USP is a 7-item questionnaire that comprehensively evaluates urinary symptoms in both men and women, assessing stress incontinence, overactive bladder, and urinary obstruction symptoms and their severity.¹

METHODS

Sample

The USP was applied to a cohort of early MSA patients from the bioMUSE Natural History study at Vanderbilt University Medical Center (Table).

Table. Population

N	16
Sex (F:M)	8:8
Mean Age (range)	62 (49-79)
Mean duration motor symptoms (years)	3.25

Measures

All completed a neurologic examination, the Unified Multiple System Atrophy Rating Scale (UMSARS) Part I, the Natural History and Neuroprotection in Parkinson Plus Syndromes Parkinson Plus scale (PPS), and the Urinary Symptom Profile (USP) questionnaire.

Statistics

The PPS and UMSARS total urinary symptoms scores were correlated with the total USP score using a t-distribution and the Spearman's rank correlation.

RESULTS

Across this cohort, the most severe complaints were related to urinary urgency (OAB avg = 8.4), and reduced amount of time to hold urine (SUI avg = 2.63) (Figure 1).

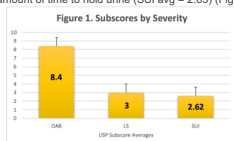
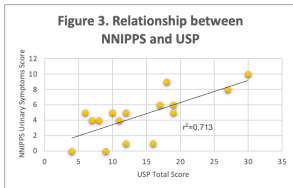
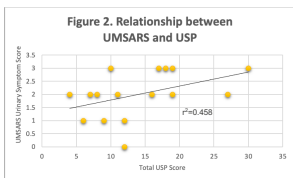


Figure 1. SUI = stress urinary incontinence, OAB = overactive bladder, LS = low stream

RESULTS

Subscale analysis indicates that the most common symptoms relate to OAB, and the least common were SUI.

The total USP scores positively correlated with total urinary symptom scores from the UMSARS ($p = 0.075$, $r^2 = 0.458$) (Figure 2) and PPS ($p = 0.002$, $r^2 = 0.713$) (Figure 3).



CONCLUSIONS

In early MSA, the most severe urinary symptoms were observed in the OAB subscale, specifically urgency and frequency.

These results suggest that the USP can be used for comprehensive evaluation of urinary complaints and give important insights to the symptoms of patients early in disease.

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¹ Heib F, Richard F, Amencio G, et al. Comprehensive evaluation of bladder and urethral dysfunction symptoms: development and psychometric validation of the Urinary Symptom Profile (USP) questionnaire. *Urology*. 2008;71(4):646-656. doi:10.1016/j.urology.2007.11.100