

CORRELATION BETWEEN THE UROGENITAL DISTRESS INVENTORY AND THE 72H BLADDER DIARY: UROGENITAL DISTRESS INVENTORY (UDI) OR ITS ABRIDGED VERSION (UDI-6) AS AN ALTERNATIVE TO BLADDER DIARY FOR OLDER WOMEN WITH MIXED URINARY INCONTINENCE?

Hypothesis / aims of study

The 72-hour bladder diary is a simple tool in which symptoms of urinary incontinence are measured and quantified: micturitions, incontinence episodes, pad usage and other information (fluid intake, degree of urgency and/or incontinence, etc.) (1). However, because of its complexity and time commitment, the bladder diary is often associated with poor compliance in older adults. The Urogenital Distress Inventory (UDI) measures the presence or absence of a symptom and the degree to which symptoms associated with incontinence are troubling to the respondent. An abridged version of the form, UDI-6, has also been shown to be valid and reliable when used with older adults (2). The aim of this study was to evaluate the relationship between the bladder diary and the UDI forms among women aged 60 and over suffering from mixed urinary incontinence.

Study design, materials and methods

This report is a cohort study nested in a larger quasi-experimental pre-post cohort study of aging women. Women aged 60 and over with mixed urinary incontinence were recruited from five continence clinics. To be included, their symptoms of mixed urinary incontinence had to be confirmed by the referring physician. After giving consent, the women completed the UDI questionnaire as part of an initial evaluation session. They were then asked to fill out a 72-hour bladder diary, in which they recorded micturition times, incontinence episodes and pad usage. Bladder diaries were collected in a follow-up visit, one to two weeks thereafter. Pearson correlation coefficients between both UDI and UDI-6 and each of the three components in the bladder diary were calculated using SPSS 16.0 software.

Results

Forty women aged 60 years and over with mixed urinary incontinence were recruited for this study. Demographic data and the mean UDI, UDI-6 and 72-hour bladder diary scores are shown in Table 1. Correlation coefficients and significance levels are shown in Table 2.

Table I. Demographic, questionnaire and bladder diary scores in 40 mixed UI women

	N	Mean ± SD	Range
Age	40	69.52 ± 6.61	60.00 – 87.00
UDI <i>total score</i>	40	25.87 ± 9.59	11.00 – 46.00
UDI-6 <i>total score</i>	40	13.02 ± 4.13	6.00-23.00
Number of micturitions in 72 hrs	40	27.90 ± 11.52	10.00 – 68.00
Number of incontinence episodes in 72 hrs	40	5.03 ± 3.50	0.00 – 13.00
Number of pad changes in 72 hrs	40	3.29 ± 4.13	0.00 – 18.00

Table II. Correlation between the UDI, UDI-6 and bladder diary parameters in 40 mixed UI older women

	Number of micturition in 72 hrs	Number of incontinence episodes in 72 hrs	Number of pad changes in 72 hrs
UDI <i>total score</i>	0.467 (0.003) **	0.210 (0.205)	0.219 (0.186)
UDI-6 <i>total score</i>	0.524 (0.001) **	0.201 (0.226)	0.282 (0.087)
UDI – question 1	0.386 (0.015) *	-	-
UDI – question 3	-	0.056 (0.773)	-
UDI – question 4	-	0.158 (0.345)	-
UDI – questions 5	-	0.335 (0.040) *	0.487 (0.002) **
UDI – question 6	-	0.077 (0.647)	-
UDI – question 7	-	0.135 (0.420)	0.055 (0.743)
UDI – question 9	-	-0.047 (0.781)	-
UDI – question 11	0.259 (0.111)	-	-

*p < 0.01; **p < 0.05; UDI Questions: 1: Do you experience frequent urination? 3: Do you experience urine leakage related to the feeling of urgency? 4: Do you experience urine leakage related to physical activity, coughing or sneezing? 5: Do you experience general urine leakage not related to urgency or activity? 6: Do you experience small amounts of urine leakage (one or a few drops)? 7: Do you experience large amounts of urine leakage (the bladder content or almost all of it)? 9: Do you experience bedwetting? 11: Do you experience a feeling of incomplete bladder emptying?

Interpretation of results

Only the number of micturitions in 72 hours was correlated significantly with the total UDI score, although moderately. The level of correlation was maintained, and even increased slightly, with the UDI-6.

Individually, few of the UDI-question correlated to the number of micturitions, incontinence episodes and pad changes in 72 hrs. As expected, UDI-question 1 correlated to the number of micturitions, but only slightly. UDI-question 5 correlated slightly to the total number of incontinence episodes and only moderately to the total number of pad changes. However, none of the remaining questions (UDI – question 3, 4, 6, 7, 9), which were expected to correlate to the total number of incontinence episodes in 72 hrs, correlated. Specifically, UDI – question 7, considered to be indirectly indicative of pad changes, did not correlate to the total number of pad changes in 72 hrs.

Concluding message

The results suggest that the UDI questionnaire and the 72-h bladder diary do not evaluate the same aspects of mixed urinary incontinence symptoms in older women. Thus, in order to ensure a more complete UI symptom description, the study underscores the importance of employing both tools: UDI or UDI-6 form and 72h bladder diary.

References

1. Assessment of reliability of 1-day, 3-day and 7-day frequency volume charts. *European Urology Supplements* 2004;2:30
2. Health related quality of life measures of for women with UI: the incontinence impact questionnaire and the urogenital distress inventory. *Quality of life research* 1994;3:291-306

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<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Ethics committee of the Institut Universitaire de Gériatrie de Montréal
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes