

INCONTINENCE SYMPTOM INDEX (ISI) TOTAL BOTHER SCORE DIRECTLY PROPORTIONAL TO PAD USAGE BUT NOT 24 HOUR PAD WEIGHT

Hypothesis / aims of study

We hypothesize that the Incontinence Symptom Index (ISI) total bother score ^[1] does not directly correlate with 24 hour pad number nor 24 hour net pad weight ^[2].

Study design, materials and methods

We retrospectively reviewed all Artificial Urinary Sphincter (AUS) and Male Bulbourethral Sling candidates from August 2006 to February 2012 in a single institution by a single surgeon. We queried our institutional AUS Database and obtained 168 AUS patients in addition to 34 male bulbourethral sling patients who had completed ISI Bother Score Questionnaires as part of their preoperative evaluation. Of the 168 AUS patients, 152 were eliminated due to lack of either preoperative ISI Bother Score Questionnaire or documented 24 hour pad test. Of the 34 patients undergoing male sling, 12 were excluded due to lack of either preoperative ISI Bother Score Questionnaire or documented 24 hour pad test. Patients who completed the Incontinence Symptom Index bother questions #9 and #10 (see Table 1) and a 24 hour pad test preoperatively met criteria for inclusion in the analysis. A total of 38 patients met the inclusion criteria out of 202 patients.

We analysed age of patients, total ISI bother score (#9 + #10), number of pads used in 24 hours, total net weight of pads over 24 hours and amount of time between completion of the ISI Questionnaire and the 24 hour pad test. Urology staff members calculated and recorded the number of pads and the net weight of pads collected by the patient over 24 hours. Summary statistics were used to describe the demographic and clinical characteristics of the patients. Spearman's rank correlation coefficient was used to estimate the relationship between Total Bother Score and Total Number of Pads and Net Pad Weights. Statistical analysis was performed using STATA/SE version 12.1 statistical software (Stata Corp. LP, College Station, TX).

Table 1. – Incontinence Symptom Index Total Bother Score

Question Text	0	1	2	3	4
#9 - Overall, how often have you had to change your daily activities because of your urinary incontinence?	never	rarely	sometim es	Most of the time	All of the time
#10 - Overall how big of a social problem (anxiety/embarrassment/avoiding social activities), has your urinary incontinence been for you over the past month?	No proble m	Very small problem	Small problem	Moderat e Problem	Big Proble m
Total Bother Score = #9 + #10 (range from 0-8)					

Results

The results of the summary statistics from the analysed variables are detailed in Table 2. The statistical comparison between ISI Bother Score, pad weight and pad number is presented in Table 3.

Table 2. Summary Statistics	
	All Patients
Age	
N	38
Mean (SD)	65.9 (8.1)
Median	65.4
Min-Max	47.0-85.6
Total Bother Score	
N	38
Mean (SD)	4.2 (2.7)
Median	4
Min-Max	0.0-8.0
Number of Pads	
N	38
Mean (SD)	4.1 (2.5)
Median	4.0

Table 2. Summary Statistics	
Min-Max	1.0-9.0
Net Pad Weight	
N	38
Mean (SD)	485.3 (576.8)
Median	254.1
Min-Max	8.3-1974.6
Time (months)	
N	38
Mean (SD)	6.6 (10.7)
Median	1.9
Min-Max	0.0-40.9

Interpretation of results	Table 3. Spearman Correlation Analysis			
	N	rho	p-value	
In the small sub-cohort of	Total Bother Score & Total Number of Pads	38	0.45	0.005
	Total Bother Score & Net Pad Weight	38	0.25	0.131

patients with complete data, ISI Total Bother Score directly correlated with the Total Number of pads used over 24 hours ($p=0.005$). Total Net 24 hour pad weight correlated positively with Total Bother Score, but this was not statistically significant ($p=0.131$).

Concluding message

In our patient population, the Total Bother score from the ISI statistically correlated with pad number but not 24 hour pad weight. This suggests that these particular questions in combination may be more sensitive to the bother experienced in relation to need to change pads rather than the actual volume of leakage. This assertion will need to be validated with a larger group of patients including a sub-analysis of the effect of pad types on patient perception of bother.

References

1. J.T. Wei, R.L. Dunn, L. Hoag, G. Faerber, R. Dorr, E.J. McGuire. The incontinence symptom index (ISI): a novel and practical symptom score for the evaluation of urinary incontinence severity J Urol, suppl., 169 (2003), p. S33 abstract 128.
2. Wallerstedt A, Carlsson S, Nilsson AE et al: Pad Use and Patient Reported Bother From Urinary Leakage After Radical Prostatectomy. Journal of Urology 2012; 187: 196-200.

Disclosures

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