

	#	age ^a	male	fem	vv ^a	ups ^a	VV(Q) ^a	PVR ^a	UPS(Q) ^a
OAB	46	69	15	31	198	2.2	186	57	1.9
Non-OAB	36	67	12	24	161	1.8	210	40	2.1

IS THERE A RELATIONSHIP BETWEEN

VOIDED VOLUME AND THE URGE TO VOID?

Hypothesis / aims of study

The aim of this study is to quantitate the relationship between the severity of urgency, as measured by the urgency perception score (UPS) [1], and voided volume (VV) in patients with & without overactive bladder (OAB).

Study design, materials and methods

This is a prospective observational study of consecutive patients with lower urinary tract symptoms (LUTS) categorized as OAB or non-OAB based on the overactive bladder symptom score. All subjects completed a 24 hour bladder diary. At each void, they completed the UPS which quantifies the intensity of the urge to void on a scale from 0 (no urge) to 4 (desperate urge).

The data was assessed in two ways: 1) all the voids and UPS's were analyzed as one large group, 2) each individual subject was assessed separately. Uroflow (Q), VV and post void residual (PVR) were measured contemporaneously for one void. Age, sex, & clinical diagnoses were collected. Spearman's rank correlation coefficient was utilized because of the non-parametric nature of the data.

Results

1222 separate micturitions were analyzed (VV & corresponding UPS) in 82 subjects. The data is summarized in the Table. Mean & median VV for the entire group = 183 ml (SD-130) & 150 ml (range 5-960) respectively. Mean & median UPS = 2 (SD-1.1 and range 0-4). There was a weak correlation between VV & UPS in both the OAB group ($r = .24, p < .0001$) and the non-OAB group ($r = .3, p < .0001$). With respect to individual subjects, in the OAB group there was a correlation between VV & UPS in 19/46 (41%) and no correlation in the remaining 27/46 (59%). In the non-OAB group, 18/36 (50%) of the subjects had a correlation.

Interpretation of results

Although there was a mild correlation between VV & UPS, in 59% of OAB patients there was no correlation at all. That suggests that something other than bladder volume is causing the urge to void. A multivariate analysis of subjects, sufficiently powered, will be necessary to verify these findings.

Concluding message

More research is needed to determine whether there is a correlation between underlying diagnoses, type of treatment and treatment outcomes based on the individual relationships between VV & UPS.

Table 1: Comparisons between OAB and non-OAB voids

VV(Q) = voided volume of the uroflow; UPS(Q) = UPS for uroflow void;

a- Mean values

References

1. Blaivas JG, Panagopoulos G, Weiss JP, Somaroo C, Chaikin DC. "The urgency perception score: Validation and Test-Retest." J Urol 2007;177:199-202.

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Is this a clinical trial?

No

What were the subjects in the study?

NONE