

DOES OVER-WORKING IMPAIR QUALITY OF LIFE?

Hypothesis / aims of study

Urinary incontinence is a common and distressing condition known to adversely affect Quality of Life (QoL). Whilst women with irritative urinary symptoms associated with the overactive bladder have been shown to have a greater impact on QoL than those with urodynamic stress incontinence [1], cystometry findings have not been shown to be predictive of QoL impairment [2]. The purpose of this study was to determine whether there is a correlation between detrusor 'work' and QoL impairment in women with symptomatic detrusor overactivity.

Study design, materials and methods

Women were recruited prospectively from a tertiary referral urodynamic clinic. All complained of troublesome 'overactive bladder' symptoms and underwent videocystourethrography including uroflowmetry, filling cystometry and pressure/flow voiding studies using a Laborie Aquarius urodynamic system. Analysis of the urodynamic trace was performed and each uninhibited detrusor contraction identified. The number, maximum detrusor amplitude and mean detrusor amplitude was recorded for each trace. In addition the area under each uninhibited detrusor contraction was mapped and both the mean area under the curve (Mean AUC) and total area under the curve (Total AUC) calculated. QoL assessment was performed using the King's Health Questionnaire (KHQ) [1]. All procedures were performed in accordance with ICS Guidelines for Good Urodynamic Practice [3]. Statistical analysis was performed using SPSS (Version 11) and correlation was assessed using the Pearson method.

Results

In total 16 women with urodynamically proven idiopathic detrusor overactivity were recruited over a three-week period. Six women had both provoked and systolic detrusor overactivity, six provoked and three systolic alone. When KHQ domain scores were correlated against urodynamic parameters defining the size and frequency of the uninhibited contractions, there was no significant association found between QoL and contraction frequency, mean amplitude or maximum amplitude of contraction [Table 1].

QoL Domains	Freq. of Contractions		Max. Amplitude		Mean Amplitude	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
General Health	0.235	0.381	-0.167	0.537	-0.131	0.629
Incontinence Impact	-0.056	0.836	-0.493	0.053	-0.394	0.131
Role Limitations	0.091	0.748	-0.048	0.865	-0.103	0.714
Physical Limitations	-0.147	0.616	0.028	0.924	-0.027	0.926
Social Limitations	-0.005	0.986	-0.206	0.480	-0.252	0.385
Emotions	0.118	0.688	-0.291	0.313	-0.319	0.266
Sleep / Energy	0.242	0.404	-0.332	0.246	-0.193	0.509
Severity Measures	0.152	0.604	-0.200	0.493	-0.234	0.420

TABLE 1: CORRELATION OF DETRUSOR CONTRACTIONS WITH QUALITY OF LIFE

When examining area under the detrusor curve there again was no correlation with 7 of the 8 domains [Table 2]. Equally there was no correlation with symptom severity scores with either detrusor contractions or area under the curve.

QoL Domains	Mean AUC		Total AUC	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
General Health	-0.226	0.400	0.123	0.650
Incontinence Impact	0.061	0.823	-0.503	0.047
Role Limitations	-0.075	0.790	-0.239	0.391
Physical Limitations	0.126	0.667	-0.140	0.633
Social Limitations	-0.390	0.168	-0.113	0.701
Emotions	-0.413	0.143	-0.219	0.452
Sleep / Energy	-0.197	0.500	-0.030	0.918
Severity Measures	-0.276	0.340	-0.095	0.748

TABLE 2: CORRELATION OF DETRUSOR CONTRACTIONS WITH QUALITY OF LIFE

Interpretation of results

To the best of our knowledge this is the first study to attempt to correlate detrusor 'work', measured by area under the uninhibited detrusor contraction curve, with QoL. Based on this data, it would appear that there is no correlation of detrusor 'work' and QoL and this would agree with previously reported studies assessing other cystometric parameters. Our findings support the concept that the effect of lower urinary tract symptoms on QoL impairment is multifactorial and may not be predicted by urodynamic parameters alone. These data are part of an ongoing study assessing the effect of urodynamic parameters on QoL assessment.

Concluding message

Quality of Life impairment in women with symptomatic detrusor overactivity does not appear to correlate with the size, frequency or amount of 'work' done during uninhibited detrusor contractions.

References

1. Br J Obstet Gynaecol 1997; 104: 1374-1379
2. Neurourol & Urodynamics 2000; 19: (4) 522-523
3. Neurourol Urodyn 2002; 21 (3): 261