

## THE ASSOCIATION BETWEEN THE ICIQ-LUTS & THE ICIQ-BLADDER DIARY IN ASSESSING LUTS

### Hypothesis / aims of study

The bladder diary (BD) provides an objective non-invasive method of investigating lower urinary tract symptoms (LUTS) while symptom questionnaires, such as the ICIQ-MLUTS (1) and ICIQ-FLUTS (2) for males and females respectively, provide a subjective assessment. The association between objective and subjective assessments has not been well established for the ICIQ. This study hypothesises that there is strong positive association between the ICIQ-MLUTS/FLUTS and the ICIQ-BD (3).

### Study design, materials and methods

Retrospective analysis of data collected from an urodynamics' database was conducted. Only patients who completed both the ICIQ-LUTS and the ICIQ-BD were included. Assessment of the relationship between the ICIQ-BD and the ICIQ-LUTS with regards to daytime frequency and nocturia episodes was conducted using descriptive statistics to determine how well they correlate.

### Results

3054 patients were on the database with only 529 patients fully completing both the ICIQ-BD and ICIQ-LUTS from February 2012 until November 2014. Criterion testing showed fair agreement between the nocturia question on the ICIQ-LUTS and the ICIQ-BD (Kappa = 0.339;  $p < 0.001$ ; 48.5%). Whereas diary recordings of daytime voiding frequency showed less agreement with questionnaire responses (Kappa = 0.254;  $p < 0.001$ ; 42.7%). The degree of agreement was higher at the extremes of frequencies (Table 1). With increasing daytime frequency there was a tendency of the patients to exaggerate the numbers on the ICIQ-LUTS. Females had a slightly higher agreement than males during both the day time (43.2% vs 41.6%) and night time (49.3% vs 47%).

Table (1): Screening power of ICIQ-LUTS and ICIQ-BD recording for daytime frequency and nocturia episodes.

Frequency	Sensitivity	Specificity	Predictive +	Predictive -	Agreement	Kappa
<b>Day time</b>						
1-6	46.8	92.9	82.3	71.4	73.9	0.425
7-8	41.3	79.7	46.8	75.8	68.1	0.217
9-10	29.2	77.5	20.8	84.4	69.4	0.058
11-12	31.4	89.5	17.5	94.9	85.6	0.152
13+	77.8	89.0	27.6	98.7	88.5	0.360
Overall	-	-	-	-	42.7	0.254
<b>Night time</b>						
0	48.8	94.7	61.9	91.2	87.7	0.476
1	49.4	84.0	61.4	76.3	72.2	0.35
2	44.0	76.0	36.2	81.4	68.4	0.186
3	33.3	86.6	29.1	88.7	79.0	0.187
4+	71.0	92.6	59.0	95.5	89.8	0.586
Overall	-	-	-	-	48.5	0.339

### Interpretation of results

The reason for the higher agreement of the ICIQ-LUTS and the ICIQ-BD as regards to nocturia episodes may be explained by the more bothersome impact of nocturia episodes thus patients remember it more when filling the ICIQ-LUTS. Also, the number of nocturia episodes is less than the daytime frequency thus more easily remembered. Another aspect is that nocturia questions have a smaller range for each choice, while for example in the daytime frequency the range is 1-6. This study also highlights the facts that patients fill out both questionnaires independently of each other.

### Concluding message

The ICIQ-BD is a simple, cheap, valid and reliable objective method to assess LUTS. However, an agreement between the ICIQ-BD and the ICIQ-LUTS with regards to daytime frequency and nocturia episode is weak and therefore both are needed in the assessment of patients with LUTS.

### References

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### Disclosures

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