

SYMPTOM SEVERITY AND PATIENT PERCEPTIONS IN OVERACTIVE BLADDER

Hypothesis / aims of study

To examine the relationship between symptom severity and patient perceptions in patients with overactive bladder (OAB) symptoms.

Study design, materials and methods

The study is a post-hoc analysis of data from a psychometric validation study of OAB-Questionnaire. The following measures were estimated and analyzed for their relationship.

*The Overactive Bladder Symptom Score (OABSS)*¹: The OABSS is a symptom assessment instrument designed to quantify OAB symptoms into a single score ranging from 0 to 15 (Table 1). It consists of four questions on OAB symptoms: daytime frequency, night-time frequency, urgency and urgency incontinence. *Patient Perception of Bladder Condition (PPBC)*: It is a single-item self-assessment of perceived bladder condition on a 6-point rating scale ranging from 1 "no problems at all" to 6 "many severe problems". *Overactive Bladder Questionnaire (OAB-q)*²: It is a disease specific questionnaire for OAB consisting of 8-item symptom bother scale, 25-item health-related quality of life (HRQL) scale (divided into four subscales of coping, concern/worry, sleep and social interaction) and a total HRQL scale. *Medical Outcomes Study Short Form 36 (SF-36)*: It is a widely used generic HRQL questionnaire comprising of 8 subscales. Spearman's rank order test and Kruskal-Wallis test were used for statistical analysis.

Results

A total of 194 participants were included (median age: 71 years). Most participants reported moderate bladder problems (34.4%) with a mean OABSS of 7.4.

The OABSS correlated relatively highly with the PPBC and OAB-q subscales of HRQL ($r=0.36$ to 0.57) (Table 2); a particularly high correlation was observed in the OAB-q symptom bother scale ($r=0.73$). However, the OABSS correlated somewhat lower with the SF-36 subscales ($r=0.16$ to 0.27). When symptom severity was categorized into mild (OABSS ≤ 5), moderate (OABSS 6-11) and severe (OABSS ≥ 12) and compared with respect to the PPBC and the OAB-q and SF-36 subscales, all groups were significantly different from each other (all $p < 0.05$), except the SF-36 subscales of VT and RE. Greater OABSS severity was consistently associated with increases in all the instrument scores. The OAB-q subscales, especially symptom bother, clearly discriminated among the three groups.

For individual symptoms, fairly high correlations between the OABSS and the OAB-q items were observed: for daytime frequency with "frequency urination during the daytime hours" ($r=0.44$); night-time frequency with "night-time urination" ($r=0.44$), "waking up at night because you had to urinate" ($r=0.51$) and "awakening from sleep" ($r=0.44$); urgency with "a sudden urge to urinate with little or no warning" ($r=0.65$) and "an uncontrollable urge to urinate" ($r=0.69$), urgency incontinence with "accidental loss of small amounts of urine" ($r=0.74$) and "urine loss associated with a strong desire to urinate" ($r=0.79$). All the items except "awakening from sleep" belonged to the OAB-q symptom bother.

Interpretation of results

The results demonstrated that OAB symptoms have a negative impact on patient perceptions. All the outcome measures, the PPBC, OAB-q and SF-36, were associated with the OABSS and varied by symptom severity. The findings also suggest that one could roughly but sufficiently infer patient perceptions of bladder condition and symptom bother by measuring symptom severity while it would be difficult for either generic or disease-specific HRQL. The OABSS can be considered as a simple and convenient tool to assess symptom severity and bother simultaneously.

Concluding message

OAB symptoms have a negative impact on multiple aspects of patient perceptions. Symptom severity assessed by the OABSS is highly correlated with symptom bother. The OABSS is a simple and convenient tool to assess symptom severity and bother simultaneously.

Table1. Overactive Bladder Symptom Score (OABSS)

| Question item | Repose | Score |
|--|--------------------|-------|
| Q1. How many times do you typically urinate from walking in the morning until sleeping at night? | ≤ 7 | 0 |
| | 8-14 | 1 |
| | ≥ 15 | 2 |
| Q2. How many times do you typically wake up to urinate from sleeping at night until waking in the morning? | 0 | 0 |
| | 1 | 1 |
| | 2 | 2 |
| | ≥ 3 | 3 |
| Q3. How often do you have a sudden desire to urinate, which is difficult to defer? | None | 0 |
| | <once/week | 1 |
| | \geq once/week | 2 |
| | About once/week | 3 |
| | 2-4 times/day | 4 |
| | ≥ 5 times/day | 5 |
| Q4. How often do you leak urine because you cannot defer the sudden desire to urinate? | None | 0 |
| | <once/week | 1 |
| | \geq once/week | 2 |
| | About once/week | 3 |
| | 2-4 times/day | 4 |

*Patients were instructed to circle the score that best applied to their urinary condition during the past week; the overall score was the sum of the four scores.

Table 2. Correlations of OABSS with PPBC, OAB-q and SF-36

| PPBC | n | r | OAB-q subscales | n | r | SF-36 subscales ^{*1} | n | r |
|------|-----|------|--------------------|-----|-------|-------------------------------|-----|-------|
| PPBC | 192 | 0.56 | Symptom bother | 193 | 0.73 | PF | 187 | -0.27 |
| | | | Coping | 194 | -0.53 | RP | 187 | -0.19 |
| | | | Concern | 194 | -0.44 | BP | 188 | -0.19 |
| | | | Sleep | 194 | -0.57 | GH | 191 | -0.19 |
| | | | Social interaction | 194 | -0.36 | VT | 187 | -0.18 |
| | | | HRQL total | 194 | -0.45 | SF | 188 | -0.25 |
| | | | | | | RE | 187 | -0.16 |
| | | | | | | MH | 187 | -0.20 |

*r is Spearman's correlation coefficient. All correlations p<0.05, except RE where p=0.08

*1 Physical function (PF), role limitations-physical (RP), vitality (VT), general health perceptions (GH), bodily pain (BP), social function (SF), role limitations-emotional (RE), and mental health (MH)

References

- 1) Urology 68: 318-323, 2006.
- 2) Qual Life Res 11:563-74, 2002.

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|---|--|
| Specify source of funding or grant | None |
| Is this a clinical trial? | Yes |
| Is this study registered in a public clinical trials registry? | No |
| What were the subjects in the study? | HUMAN |
| Was this study approved by an ethics committee? | Yes |
| Specify Name of Ethics Committee | Japan Red Cross Medical Center Ethics Committee |
| Was the Declaration of Helsinki followed? | Yes |
| Was informed consent obtained from the patients? | Yes |