

## **IMPACT OF BOTHER SPECIFIC TO EACH SYMPTOM OF THE INTERNATIONAL PROSTATE SYMPTOM SCORE (IPSS) ON THE QUALITY OF LIFE (QOL): CONCOMITANT EVALUATION OF IPSS WITH A VISUAL ANALOGUE SCALE (VAS) QUESTIONNAIRE FOR BOTHER SPECIFIC TO EACH SYMPTOM**

### **Hypothesis / aims of study**

The severity of lower urinary tract symptoms (LUTS) is well documented using the International Prostate Symptom Score (IPSS) (1). However, the severity of symptom score alone does not necessarily reflect the degree to which patients are bothered by LUTS (2). Patient satisfaction may not directly correlate with an improvement of the most severe IPSS score. Every symptom, associated with lower urinary tract dysfunctions, has a possible impact on quality of life (QOL). For example, even one or two episodes of nocturia can have a most significant impact on QOL for a patient, in spite of his complaining of higher scores in other symptoms than nocturia. Although the concomitant use of IPSS and AUA bother index was recommended to assess BPH related QOL and treatment outcome (3), clinical data has been limited. Recently the visual analogue scale (VAS) is widely accepted to evaluate QOL quantitatively. We developed a VAS questionnaire (VAS-QOL-questionnaire, shown in Figure 1) in order to assess the bother (or satisfaction) specific to each of the 7 items of IPSS on the patient's QOL using a VAS measure. The objective of this study was to assess the impact of bother specific to each item of IPSS on the patient's QOL, evaluated with concomitant use of the IPSS with the VAS-QOL-questionnaire.

### **Study design, materials and methods**

105 consecutive male patients with the chief complaint of LUTS between 47 and 92 years old visiting our institution were asked to fill out both a conventional IPSS questionnaire and a VAS-QOL-questionnaire (Figure 1) in order to assess bother (or satisfaction) specific to each of the 7 items of IPSS on the patient's QOL. The VAS used in this study was a 10-cm line ranging from delighted to terrible in order to ask bother (or satisfaction) specific to each item of the 7 questions in the conventional IPSS. Stepwise logistic regression analysis was used in an attempt to define the best predictor of IPSS-QOL score among each score (0-5) of the 7 items of the conventional IPSS questionnaire as well as among IPSS-QOL score and each VAS measure (0-10mm) of 7 items of the VAS-QOL questionnaire.

### **Results**

The chief complaint failed to match to an item with the most severe score among the 7 items of IPSS questionnaires in 38% of the total patients. On the contrary, an item with the longest VAS measure assessed by the VAS-QOL questionnaire matched to the chief complaint in 77% of the total patients ( $p < 0.05$ ). Using the conventional IPSS questionnaire, simple regression analysis revealed that the score for incomplete emptying was the best predictor of IPSS-QOL score, followed by the score for nocturia. On the contrary, using the VAS-QOL questionnaire, simple regression analysis revealed that the VAS measure for nocturia was the best predictor of IPSS-QOL score, followed by a measure of VAS of frequency. Among the total 14 items including both 7 items of IPSS and 7 items of VAS measure to define the best predictor of IPSS-QOL, multiple stepwise linear regression analysis revealed that the best predictor was the VAS measure for nocturia assessed by the VAS-QOL questionnaire ( $F$ -value: 33.2), followed by the VAS measure for frequency ( $F$ -value: 18.2) and the score for incomplete emptying ( $F$ -value: 16.9).

### **Interpretation of results**

Using VAS, assessment of bother or satisfaction specific to each item of the IPSS questionnaire has a significant impact on identifying the patient's chief complaint as well as on the patient's QOL. Assessment of severity of each symptom score of the IPSS questionnaire alone likely fails to identify the patient's chief complaint.

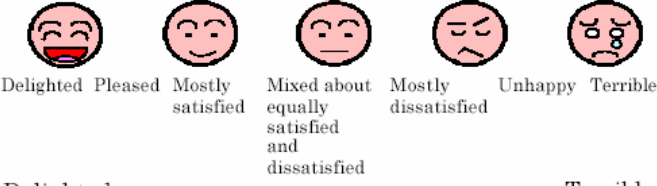
**Concluding message**

Our study supported concomitant use of both conventional IPSS and VAS-QOL questionnaires. Treatment of targeting on a specific symptom with the most impact on patient's QOL, evaluated with the VAS-QOL questionnaire, will likely improve total QOL of a patient with LUTS.

**References**

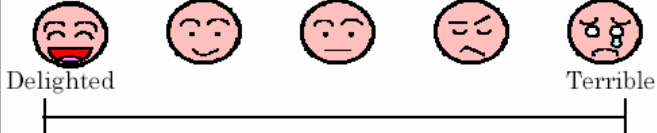
- (1) J Urol 148: 1549-1557, 1992
- (2) J Urol 157: 885-889, 1997
- (3) J Urol 153: 669-673, 1995

Figure 1, QOL-VAS questionnaire  
 Visual Analog Scale for QOL Questionnaire for Bother about a Symptom

<p>Example</p>	 <p>Delighted Pleased Mostly satisfied Mixed about equally satisfied and dissatisfied Mostly dissatisfied Unhappy Terrible</p> <p>Delighted _____ Terrible</p> <p>X</p> <p>If you have an urinary symptom, how would you rate your bother? Please mark on the linear scale above in accordance with the satisfaction with each urinary symptom. For example: Unhappy (as shown above)</p>
<p>1. Incomplete emptying        :A sensation of not emptying your bladder completely after you finished urinating.</p>	<p>Delighted _____ Terrible</p>
<p>2. Frequency        :To urinate again less than two hours after you finished urinating.</p>	<p>Delighted _____ Terrible</p>
<p>3. Intermittency        :To stop and start again several times when you urinate.</p>	<p>Delighted _____ Terrible</p>
<p>4. Urgency        :Difficulty to postpone urination.</p>	<p>Delighted _____ Terrible</p>
<p>5. Weak stream        :A weak urinary stream.</p>	<p>Delighted _____ Terrible</p>
<p>6. Hesitancy        :Strain to begin urination.</p>	<p>Delighted _____ Terrible</p>
<p>7. Nocturia        :Frequent voiding at night.</p>	<p>Delighted _____ Terrible</p>

**Visual Analog Scale for QOL due to Total Urinary Symptoms**

If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that? Please mark on the linear scale below.

<p>QOL due to your total urinary condition</p>	 <p>Delighted _____ Terrible</p>
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