LUTS, ED, QOL: ALPHABET SOUP OR REAL CONCERNS TO AGING MEN?

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ABSTRACT

The severity of symptoms and the degree to which they negatively impact on quality of life (QOL) are the major factors prompting patients with benign prostatic hyperplasia (BPH) to seek treatment. Several tools have been developed to assess symptom severity in patients with BPH, including the International Prostate Symptom Score (IPSS), the Danish Prostate Symptom Score (DAN-PSS), and the International Continence Society (ICS) questionnaire. Data from the Veterans Affairs Cooperative Study show that reductions in IPSS scores predict global ratings of improvement with treatment. Instruments have also been developed to measure the impact of urinary symptoms on QOL and have shown that as symptom severity increases, the impact on QOL also increases. Data from studies conducted in the United States, France, Scotland, and Japan reveal a similar pattern regarding the impact of symptom severity on QOL. Studies have also demonstrated that medical treatment with α-blockers, for example, is associated with a reduction in symptoms and a corresponding improvement in QOL. Patients with BPH frequently also have coexisting erectile dysfunction, which significantly affects QOL. Thus, in addition to assessment of symptoms and QOL in patients with BPH, sexual function should also be assessed in these patients.


The severity of lower urinary tract symptoms (LUTS) is an important factor in determining the need for intervention in patients with benign prostatic hyperplasia (BPH). Urologists and researchers in the field may focus on parameters of the disease, such as flow rate and prostate size, but from the patient's perspective, symptoms are what motivates them to seek treatment. Just as important as the symptoms is the bother associated with symptoms. Bother is also as important in assessing BPH as evaluating the symptoms. Instruments for evaluating symptoms and assessing their impact and the effects of interventions on quality of life (QOL) have been developed and validated.

Several tools have been developed to measure LUTS in BPH, including the International Prostate Symptom Score (IPSS) or American Urological Association (AUA) Symptom Index, The Danish Prostate Symptom Score (DAN-PSS), and the International Continence Society (ICS) questionnaire. The best-known tool for evaluating symptoms is the IPSS or AUA Symptom Index for BPH (Figure 1). Developed 8 years ago by members of the AUA, it was intended to be a descriptive, evaluative instrument to be used in deriving a symptom score. It was not, however, to be a means of diagnosing BPH. The Veterans Affairs Cooperative Study demonstrated that decreases in IPSS scores predicted global ratings of improvement with treatment. The study compared finasteride, terazosin, the combination of both drugs, and placebo in 1,229 patients with BPH. On average, a change in the score of 3 points was the minimum percentile change associated with a noticeable subjective improvement. Although the IPSS was originally created as a research tool, it has gained acceptance in the clinical realm, with widespread use among
urologists in the United States for the evaluation of BPH symptoms. The IPSS is being revisited and may be modified slightly in the near future to increase its usefulness both in the United States and in other countries.

Patients with BPH who present to urologists and who are enrolled in studies tend to have moderate-to-severe urinary symptoms. Barry et al. observed that mild AUA symptom scores (measuring 0 to 7) are achieved in 21% of patients evaluated. Moderate scores (8 to 19) are seen in 57%, and severe scores (20 to 35) occur in 23% of patients.

**ASSESSING QOL**

Symptoms associated with BPH may interfere with a patient's health status or QOL, affecting such parameters as general health, physical functioning, and mental health. In the Veterans Affairs Cooperative Study, in which patients were randomized to watchful waiting or transurethral resection of the prostate (TURP), the most important predictor of failure in patients in the watchful waiting arm was bothersomeness of symptoms. In this study, patients who were less bothered by symptoms were less likely to cross over to the TURP arm. This underscores the importance of considering the impact of symptoms on QOL. In fact, if a patient is significantly bothered by his symptoms, intervention should be seriously considered, even if he does not have a very high degree of symptoms present.

As with symptom assessment, several instruments have been devised to measure the effects of LUTS on QOL in patients with BPH. These tools include the BPH Impact Index, the Symptom Problem Index, the UROLIFE Scale, and the BPH Health-related Quality of Life Survey reported by Epstein et al.

The IPSS contains a single question on the impact of symptoms on QOL, asking patients, if they had to live with their condition as it is now, how would they feel about it? The BPH Impact Index (Figure 2) evaluates QOL in more detail, as does the Symptom Problem Index. The BPH Impact Index focuses on how bothered or how anxious patients have been about their symptoms over the past month.

**QOL DATA AND EVALUATION OF TREATMENT**

The association between symptom severity and impact on QOL has been shown in several study populations. Effects on QOL were evaluated in a comprehensive study of more than 6,000 patients.
from four countries: the United States, France, Scotland, and Japan.11 Data from patients in these countries reveal that as symptom severity increases, so does the impact on various parameters of QOL, such as bother, interference, general health, and sexual satisfaction. Although the actual degree of impact varies from country to country, the general trend of increasing impact with increasing symptom severity is seen in patients from all of the locations (Figure 3).

The beneficial effects of medical therapy have been shown by using QOL measurements. For example, Lukacs et al.12 have reported that decreases in LUTS correlated with increases in QOL in patients treated with the $\alpha_1$-blocker alfuzosin for 3 years (Figure 4). This dramatic improvement with treatment was determined by using the UROLIFE Scale.

### Measuring Sexual Function

Weiner reported at the 1998 AUA meeting that erectile dysfunction is frequently present in patients who present with LUTS.13 The data also reveal that patients with more severe urinary symptoms have a greater likelihood of erectile dysfunction. Thus, patients who present with LUTS should be asked about sexual function.

Several tools have been developed to evaluate sexual function. These include the Brief Sexual Function Inventory (BSFI)14 and the International Index of Erectile Function (IIEF).15 In addition, the UROLIFE scale contains three questions regarding sexual function, and the DAN-PSS instrument also includes several items that address sexual function. Recent data from France indicate that the more severe the urinary symptoms, the greater the degree of sexual dysfunction, as measured by a decrease in the frequency of sexual intercourse and a decrease in the intensity of sexual desire.16,17 Although it is well recognized that these parameters are affected by age, the severity of urinary symptoms appears to exert an independent influence on sexual function.

It has been suggested that the treatment of BPH might improve erectile function. It may be that $\alpha$-blockers have an inherent ability to promote erections.6 Work by Traish et al.18 suggests a role for $\alpha$-adrenergic activity in penile erection. The more uroselective $\alpha$-blockers may have ejaculatory side effects. It is uncertain whether use of these agents is associated with incomplete closure of the bladder neck or if there is a direct effect on the seminal vesicles, the vas deferens, or other structures involved in the ejaculatory mechanism.

Data that support the concept that $\alpha$-blockade might improve sexual function were generated in the ALFIN study of 1,051 patients aged 50 to 75 years with moderate to severe LUTS suggestive of BPH.19 Patients in this study were treated with sus-

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<th>Question</th>
<th>None</th>
<th>Only a little</th>
<th>Some</th>
<th>A lot</th>
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<tr>
<td>1. Over the past month, how much physical discomfort did any urinary problems cause you?</td>
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<td>2. Over the past month, how much did you worry about your health because of any urinary problems?</td>
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<td>3. Overall, how bothersome has any trouble with urination been during the past month?</td>
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<td>4. Over the past month, how much of the time has any urinary problem kept you from doing the kinds of things you would usually do?</td>
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* Off-label or unapproved use under discussion.
tained-release alfuzosin, the 5α-reductase inhibitor finasteride, or a combination of both agents for 6 months. Using the DAN-PSS instrument, patients were asked to evaluate their sexual function. Patients in the alfuzosin group reported a mild improvement in erectile function. No improvement in erectile function was reported in patients who received finasteride. It is not known whether the improvement is due to an overall increase in the patient’s sense of well-being or a direct effect of the drug on sexual function.

CONCLUSIONS

Assessing and managing BPH involves not only an evaluation of symptoms and their severity, but also determining the impact of the disease on a patient’s QOL and sexual function. The degree to which patients are bothered by their symptoms is as important an indication of the need for medical treatment or surgical correction as the presence of the symptoms and parameters, such as peak flow rates and prostate size. The symptoms of BPH and their effects on patients’ lives, physical and mental function, and interference with activities of daily living are the motivating forces that drive patients to seek medical attention for BPH. The decision to intervene, then, should take into account the goals of improving QOL through the resolution or decrease of symptoms and preserving or improving sexual function.

FIGURE 3. Bar graphs give an age-adjusted means of HRQL measures after reverse-scaling and translating to 0 to 1 scale by symptom level for the United States (Olmsted County, Minnesota), France, Japan, and Scotland populations. Higher scores indicate worse health status for all measures. HRQL = health-related quality of life; LUTS = lower urinary tract symptoms. Adapted from Girman et al. Urology 51: 428–436, 1998.
REFERENCES


