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PATIENT-REPORTED MOST BOthersome SYMPTOMS AND SYMPTOM-SPECIFIC GOAL ACHIEVEMENTS IN PATIENTS WITH LOWER URINARY TRACT SYMPTOMS SECONDARY TO BENIGN PROSTATIC HYPERPLASIA

Hypothesis / aims of study

Lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH) consists of a constellation of symptoms (including voiding, storage, and post-micturition). The impact of the LUTS on patients' health-related quality of life is substantial and multifaceted. Thus, the therapies aimed at treating BPH are concerned primarily with improving patients' symptoms, thereby improving quality of life. When multiple symptoms are present, the level of bother associated with individual symptoms varies and patients prioritize their treatment goals for symptom relief. A measure that addresses patients' most bothersome symptoms (MBS) and evaluation of symptom-specific goal achievements may lead to improved outcomes and patient satisfaction to the treatment. The objectives of this study were (1) to assess patient-reported MBS and symptom-specific goal achievements (PGA) with medical treatment in BPH patients, and (2) to identify factors that influence or have relation to the PGA.

Study design, materials and methods

Eligible patients of this prospective study were (1) men with LUTS associated with BPH, (2) age ≥50 years, and (3) International prostate symptom score (IPSS) ≥ 8. Before treatment, face-to-face interviews were conducted with 108 patients to determine their MBS and set their individual treatment goals for MBS. MBS were organized into 4 symptom categories according to 2002 ICS standardization of terminology; storage, voiding, post-micturition and genital/lower urinary tract pain. After 3 and 12 months of alfuzosin XL10mg treatment, patients reviewed their MBS and initial setting of treatment goals and described PGA compared with the treatment goals. The primary end-point was the PGA for MBS after 12 months of treatment. PGA was measured, using Likert scale, anchored with '0=not at all achieved' and '5=completely achieved'. 'Successfully achieved' was defined as a 4 or 5 on the Likert scale. 'Half achieved' was defined as a 3, 'less than half' as a 1 or 2, and 'not achieved' as a 0. The IPSS/QoL, ICS-male SF questions, urodynamic parameters, prostate size and PSA were also evaluated to identify relating factors to PGA.

Results

Mean age of the patients was 64.1 (50-83) years. Average prostate size was 29.6 (11-105) gm. Average scores of initial IPSS and QoL were 21.0 (8-34) and 4.2 (1-6). Of 108 goals listed, slow stream and daytime frequency were the most frequently reported MBS in 27 (25%) and 22 (20%) patients, respectively (Table 1). At 12 months of treatment, 16.5% of patients stated that they get successful goal achievement. And 55.7% stated that more than half of their goals were achieved (Table 2). The PGA was significantly improved at 12-month treatment compared with 3-month treatment (Table 2). The PGA was not significantly different among MBS listed. The IPSS/QoL, subscales of ICS-male SF (voiding, frequency, nocturia, QoL) except incontinence item, and Qmax were significantly improved after treatment. In the analysis, the changes in IPSS and urodynamic parameters were not related to the PGA. The IPSS was decreased by ≥ 4 points in 74% (64/87) of patients, and 20.3% (13/64) of those patients got successful achievement (Table 3). Changes in voiding sum ($p=0.018$, C.C.: -0.253) and nocturia score ($p=0.009$, C.C.: -0.280) of ICS-male SF questions related to the goal achievement. Other items of ICS-male SF questions, including QoL, were not related to the achievement. Among baseline parameters, age ($p=0.049$, correlation coefficient (C.C.): -0.200) and initial IPSS ($p=0.012$, C.C.: -0.255) were correlated to the goal achievement. None of urodynamic parameters, including Qmax, PVR and bladder outlet obstruction index was related to the goal achievement.

Interpretation of results

In BPH patients, storage symptom was more cited than voiding symptom as a MBS. The PGA was improved with treatment duration. Patients' individualized MBS did not affect the PGA. The PGA was not comparable to the improvements in the traditional measures, such as symptom questions and urodynamic parameters. The older age and the higher initial IPSS were related to the lower PGA. And the greater improvements in voiding sum and nocturia score in ICS-male SF questions were related to the greater PGA. Regarding the results, severe symptom of the participants may be responsible for the low PGA. And unrealistic expectation may affect the low achievement.

Concluding message

In spite of the significant improvements in symptom questionnaires and Qmax, the PGA was low. It is necessary to enhance communication with patients on their symptoms, treatment expectations and treatment efficacy and to develop standardized questionnaires for assessing patients' individual treatment goals and treatment efficacy in terms of PGA.

Table 1. Patient-reported most bothersome lower urinary tract symptoms

Symptom category (n=108)	n	%
Storage (n=49)		45.4
Increased daytime frequency	22	
Nocturia	20	
Urgency	6	
Incontinence	1	
Voiding (n=42)		38.9
Slow stream	27	
Hesitancy	10	
Intermittency	3	
Straining	2	

Post micturition (n=15)		13.9
	Incomplete emptying	14
	Post micturition dribble	1
Pain (n=2)		1.9
	Perineal pain/discomfort	2

Table 2. Patient-reported symptom-specific goal achievement according to the treatment duration

Symptom category	Goal achievement			
	Not	Less than half	Half	Successful
<i>3 Months (n=108)</i>				
Storage (n=49)	7	23	18	1
Voiding (n=42)	8	20	12	2
Post-micturition (n=15)	2	6	4	3
Pain (n=2)	0	2	0	0
Total	17 (15.7%)	51 (47.2%)	34 (31.5%)	6 (5.6%)
<i>12 Months* (n=96)</i>				
Storage (n=47)	8	14	19	6
Voiding (n=33)	4	10	14	5
Post-micturition (n=15)	0	6	5	4
Pain (n=1)	1	0	0	1
Total	13 (13.4%)	30 (30.9%)	38 (39.2%)	16 (16.5%)

* Goal achievement was significantly improved. (Wilcoxon signed ranks test p=0.001)

Table 3. The relation of patient-reported goal achievement and IPSS change

		Goal achievement *				
		Not achieved	Less than half achieved	Half achieved	Successfully achieved	Total
IPSS change	Worse	1	2	4	0	7 (8.0%)
	No improve	0	0	5	0	5 (5.7%)
	Improve <4	1	4	4	2	11 (12.6%)
	Improve ≥ 4	8	21	22	13	64 (73.6%)
	Total	10 (11.5%)	27 (31.0%)	35 (40.2%)	15 (17.2%)	87 (100%)

* The goal achievement was not related to the IPSS change: Chi-square test p=0.318

<i>Specify source of funding or grant</i>	No
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Samsung Medical Center IRB
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes