Influence of Pain and Urinary Symptoms by Chronic Prostatitis-like
Symptoms on Quality of Life in Young Men

Ja Hyeon Ku, Young Ho Kim*, Min Eui Kim*, Youn Soo Jeon*,
Nam Kyu Lee*, Youn Seob Song*, Young Ho Park*

*Department of Urology, Military Manpower Administration, Seoul
and Soonchunhyang University School of Medicine*, Seoul, Korea*

Purpose : To estimate the influences of pain and urinary symptoms on quality of life and determine the item that has the most predicting ability for quality of life in young men with chronic prostatitis-like symptoms. ¹⁾

Materials and Methods : Chronic prostatitis-like symptoms were measured by the National Institutes of Health-Chronic Prostatitis Symptom Index. of 28,841 men aged 20 years dwelling in the community, 16,321 men(a response rate 56.6%) completed self-administered questionnaires. A total of 1,057men who complained symptoms suggestive of chronic prostatitis were included in the study. The influences of

pain and urinary symptoms on quality of life were

determined by the logistic regression analysis. The receiver operating characteristic(ROC) curve was used to provide the predicting ability of each item quality of life.

Results : In multivariate analysis, pain and urinary symptoms were associated with an increased likelihood of impaired quality of life, and pain contributed more than urinary symptoms. Among items of pain and urinary symptoms, pain severity had the most predicting ability for impact, overall quality of life and quality of life impact domain. The areas under the ROC curves for impact, overall quality of life and quality of life impact domain were 71.3%, 69.3% and 67.0%, respectively.

Conclusions : Urinary symptoms as well as pain may be associated with an

Key Words : Chronic prostatitis, Symptoms, Quality of life

150-057 7 159-1
Tel : 02)820-4186
E-mail : randyku@hanmail.net

increased likelihood of impaired quality of life in young men with chronic prostatitis-like symptoms. In addition, our findings suggest that pain severity is the most influencing factor for quality of life in this population.

()

,
(odds ratio)
3
0-4 (mild), 5-10 (severe)
(moderate), 11-21
, 0-2
(mild), 3-5 (moderate), 6-10 (severe)
(Benign Prostatic Hyperplasia Impact Index)
,^{4,5} 7, 8 2
, 9 4 , 7-9
5
(bothersomeness)

가

(Receiver Operating Characteristic curve)

가
2000 5 11 , 가
1981 28,841 Mann -
Whitney U-test
PC-SPSS version 10.0
, p-value가 0.05

(National Institutes of Health Chronic Prostatitis Symptom Index, NIH-CPSI)³

15,264 (52.9%) , (median) 6.0, 2.0 5,0

(Table 1).

3.1 (95% [confidence interval], 2.26-4.24; $p<0.001$),
5.2 (95% , 3.38-8.05; $p<0.001$)

3.2 (95% [confidence interval], 2.19-4.73; $p<0.001$),
13.9 (95% , 7.67 - 25.35; $p<0.001$) 가 .

* IQR : interquartile range
** QoL : quality of life

Table 1. Distribution of each item and domain

Variable (Items)	Median	25th, 75th Percentiles	IQR*	5th, 95th Percentiles
Pain Locations (1,2)	1.0	1.0, 2.0	1.0	1.0, 3.0
Pain Frequency (3)	2.0	1.0, 2.0	1.0	1.0, 4.0
Pain Severity (4)	3.0	2.0, 5.0	2.0	1.0, 7.0
Incomplete Emptying (5)	1.0	0.0, 1.5	1.5	0.0, 4.0
Frequency (6)	1.0	0.0, 2.0	2.0	0.0, 4.0
Impact (7,8)	1.0	0.0, 2.0	2.0	0.0, 4.0
Overall QoL** (9)	4.0	3.0, 5.0	2.0	2.0, 6.0
Pain Domain (1-4)	6.0	4.0, 8.0	4.0	3.0, 12.0
Urinary Symptoms (5,6)	2.0	1.0, 4.0	3.0	0.0, 7.0
QoL**Impact Domain (7-9)	5.0	4.0, 6.0	2.0	2.9, 9.0
Total (1-9)	13.0	10.0, 17.0	7.0	7.0, 26.0

Table 2. Multivariate risk factors of impact, overall quality of life and quality of life impact domain*

Domain (Score range)	Adjusted Odds Ratio (95% Confidence Interval)		
	Impact	Overall QoL**	QoL** Impact domain
Pain Domain			
Severe (11-21)	13.94 (7.67-25.35)	15.68 (6.59-37.35)	25.52 (10.61-61.40)
Moderate (5-10)	3.22 (2.19-4.73)	3.87 (2.86-5.23)	4.51 (3.29-6.19)
Mild (0-4)	1.00	1.00	1.00
Urinary Symptoms			
Severe (6-10)	5.22 (3.38-8.05)	2.39 (1.37-4.12)	8.66 (4.36-17.21)
Moderate (3-5)	3.10 (2.26-4.24)	1.41 (1.01-1.99)	2.10 (1.51-2.92)
Mild (0-2)	1.00	1.00	1.00

가 .

가

,
(Table 2).

(Table 3).

Table 3. Areas under the receiver operating characteristic curves for ability of each item and domain to predict impact, overall quality of life and quality of life impact domain

Variable	Impact	Overall QoL*	QoL* Impact Domain
Pain Locations	60.1%	59.0%	62.5%
Pain Frequency	67.0%	65.2%	66.2%
Pain Severity	71.3%	69.3%	72.5%
Incomplete Emptying	66.2%	55.8%	63.1%
Frequency	66.0%	57.5%	63.7%
Pain Domain	73.6%	72.1%	75.7%
Urinary Symptoms	69.3%	58.1%	66.2%

Table 4. Comparison of the scores for each item and domain according to pain severity

Variable	Less than 3 (n=637)	Greater than 3 (n=420)	p-value*
Pain Locations	1.0 (1.0-1.0) [1.27±0.55]	1.0 (1.0-2.0) [1.57±0.94]	<0.001
Pain Frequency	1.0 (1.0-2.0) [1.43±0.65]	2.0 (2.0-3.0) [2.30±1.09]	<0.001
Pain Severity	2.0 (2.0-3.0) [2.24±0.71]	5.0 (4.0-6.0) [5.36±1.45]	<0.001
Incomplete Emptying	1.0 (0.0-1.0) [0.91±1.19]	1.0 (0.0-2.0) [1.33±1.47]	<0.001
Frequency	1.0 (0.0-2.0) [1.27±1.30]	1.0 (1.0-3.0) [1.68±1.52]	<0.001
Impact	0.0 (0.0-1.0) [0.85±1.19]	2.0 (0.0-3.0) [1.83±1.56]	<0.001
Overall QoL**	4.0 (3.0-4.0) [3.78±1.19]	4.0 (4.0-5.0) [4.52±0.99]	<0.001
Pain Domain	5.0 (4.0-6.0) [4.94±1.30]	9.0 (7.0-10.0) [9.23±2.58]	<0.001
Urinary Symptoms	2.0 (1.0-3.0) [2.18±2.15]	2.0 (1.0-5.0) [3.01±2.57]	<0.001
QoL** Impact Domain	4.0 (3.0-6.0) [4.63±1.82]	6.0 (5.0-8.0) [6.35±2.05]	<0.001
Total	11.0 (9.0-14.0) [11.75±3.89]	17.0 (15.0-22.0) [18.59±5.60]	<0.001

* Mann Whitney U-test

** QoL : quality of life

Data presented are median (25th, 75th percentiles) [mean±standard deviation].

가 가

References

1. Alexander RB, Trissel D. Chronic prostatitis. results of an Internet survey. *Urology* 1996; 48: 568-74
2. Wennimger K, Heiman JR, Rothman I, Berghuis JP, Berger RE. Sickness impact of chronic nonbacterial prostatitis and its correlates. *J Urol* 1996; 155: 965-8
3. Litwin JC, McNaughton-Collins M, Fowler FJ Jr., Nickel JC, Calhoun EA, Pontari MA, et al. The National Institutes of Health chronic prostatitis symptom index: development and validation of a new outcome measure. *J Urol* 1999; 162: 369-74
4. McNaughton-Collins M, O'Leary MP, Barry MJ. Prevalence of bothersome genitourinary symptoms and diagnoses in younger men on routine primary care visits. *Urology* 1998; 52: 422-7
5. Barry MJ, Fowler FJ, O'Leary MP, Bruskewitz RC, Holtgrewe HL, Mebust WK. Measuring disease-specific health status in men with benign prostatic hyperplasia. *Med Care* 1995; 33: AS1 45-55
6. Krieger JN, Egan KJ, Ross SO, Jacobs R, Berger RE. Chronic pelvic pains represent the most prominent urogenital symptoms of chronic prostatitis. *Urology* 1996; 48: 715-22
7. McNaughton-Collins M, Stafford RS, O'Leary MP, Barry MJ. Distinguishing chronic prostatitis and benign prostatic hyperplasia symptoms: results of a national survey of physician visits, *Urology* 1999; 53: 921-5
8. Khatami M, Rush A. A one year follow-up of the multimodal treatment for chronic pain. *Pain* 1982; 14: 45-52
9. Rowat K, Knafl K. Living with chronic pain: The spouses perspective. *Pain* 1985; 23: 259-72
10. Nickel JC, Downey J, Hunter D, Clark J. Prevalence of prostatitis-like symptoms in a population based study using the National Institutes of Health chronic prostatitis symptom index. *J Urol* 2001; 165: 842-5