

CORRELATION BETWEEN LOWER URINARY TRACT SYMPTOMS AND SEXUAL FUNCTION IN BENIGN PROSTATIC HYPERPLASIA

Hypothesis / aims of study

Recent study reported the association of the lower urinary tract symptom (LUTS) and erectile dysfunction, nevertheless, it was not investigated comprehensively on which part of LUTS is associated with sexual function. Therefore, the aim of this study was to investigate the association of each domain of International Prostate Symptom Scores (IPSS), nocturia, prostate volume and uroflowmetry with each domain of international index of erectile function (IIEF)-5.

Study design, materials and methods

The correlation of sexual function and LUTS has been investigated for 367 men with benign prostatic hyperplasia (mean age 62.0±8.26). At the first visit, IIEF-5, IPSS, uroflowmetry, residual urine and transrectal sonography were performed. 3 months after the treatment with α -blockers (tamsulosin, alfuzosin), IPSS, uroflowmetry and transrectal sonography, and IIEF-5 were measured again. IPSS was classified to the four groups, IPSS total, IPSS obstructive (OB) domain, IPSS irritative (IR) domain, and quality of life (QoL), IIEF-5 was divided to the three groups, erectile function (EF) domain, intercourse satisfaction (IS) domain and overall satisfaction (OS) domain, and the correlation of IPSS according the score of each domain to IIEF-5 was investigated.

Results

Regarding erectile function according to age groups, erectile function in individuals with the severe LUTS (IPSS>20) was deteriorated more in comparison with the mild LUTS (IPSS<8). The total score of IPSS and each domain, age, maximum and mean uroflow rate, and nocturia correlated significantly to all IIEF-5 domains ($p<0.01$).

Table 1. Correlation analysis of LUTS with each domain of IIEF-5

	IIEF total	IIEF-EF	IIEF-IS	IIEF-OS
IPSS total	r -0.234*	-0.238*	-0.204*	0.228*
IPSS-OB.	r -0.205*	-0.209*	-0.176*	0.205*
IPSS-IR.	r -0.222*	-0.225*	-0.197*	0.209*
QoL	r -0.157*	-0.152*	-0.166*	0.172*
age	r -0.411*	-0.408*	-0.394*	0.28*
Qmax	r 0.201*	0.197*	0.202	-0.149*
Mean flow	r 0.243*	0.242*	0.232*	-0.162*
residual urine	r -0.148*	-0.147*	-0.141*	0.078
Nocturia	r -0.205*	-0.205*	-0.192*	0.173*
prostate vol.	r -0.022	-0.021	-0.027	0.037

r : correlation coefficient *; $p<0.01$

Table 2. The correlation between changed rate of IPSS, nocturia, prostate volume, uroflowmetry and changed rate of each domain of IIEF-5 (T-test).

	Δ IIEF total	Δ IIEF-EF	Δ IIEF-IS	Δ IIEF-OS
Δ IPSS total	r -0.244	-0.234	-0.247	0.008
Δ IPSS-obst.	r -0.293*	-0.277*	-0.31*	0.012
Δ IPSS-irri.	r -0.07	-0.072	-0.053	-0.001
Δ QOL	r -0.333*	-0.327*	-0.312*	0.24
Δ Nocturia	r 0.103	0.104	0.087	-0.058
Δ Qmax	r -0.357*	-0.365*	-0.281	0.381*
Δ average flow	r -0.35*	-0.357*	-0.276*	0.386*
Δ residual urine	r -0.262	-0.292	-0.126	0.184

r : correlation coefficient *; $p<0.05$

Interpretation of results

After the administration of α -blockers for 3 months, the changed rate of the IPSS-OB domain and QoL correlated significantly to the improvement of total IIEF-5, EF and IS domain ($p<0.05$). The changed rate of the maximum and mean uroflow rate correlated significantly to the improvement of total IIEF-5, EF and OS domains ($p<0.05$). In addition, concerning the change of the score of IIEF-5 according to the types of α -blocker administered, a difference between tamsulosin and alfuzosin was not detected.

Concluding message

Among the parameters of LUTS, IPSS-OB domain and uroflow rate significantly correlated to the IIEF-5 EF domain, Thus it is expected that the improvement of obstructive symptoms could effectively improve erectile function.

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<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>	Ethics committee of Gyeongsang National University Hospital
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	No