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IMPROVEMENT OF LOWER URINARY TRACT SYMPTOMS BY SILDENAFIL IN BENIGN PROSTATE HYPERTROPHY PATIENTS COMBINED WITH ERECTILE DYSFUNCTION

Hypothesis / aims of study

Lower urinary tract symptoms (LUTS) is common caused by benign prostate hypertrophy (BPH) in older males. In ageing, it is well known that the population of ercetile dysfunction (ED) in male increases. Recently, it is reported that there is relationship between LUTS and ED [1]. One of reasons why is considered that medical treatment for LUTS with α1-adrenoeceptor antagonist may result affecting sexual functions in male. Sildenafil enhances the relaxation of the corpus cavernous by inhibiting phosphodiesterase type-5. It was reported that the phosphodiesterase type-5 inhibitor potentiated urethra relaxation in rabbits. Furthermore, l-arginine-nitric-oxide (NO) is an important mediator in the relaxation of smooth muscle in bladder, urethra and prostate [2, 3]. Improvement of sexual activity is considered the increasing of NO product. In this study, we investigated the improvement of lower urinary tract symptoms by sildenafil in BPH patients combined with ED.

Study design, materials and methods

Total 182 males with BPH were questioned whether they had sexual activity. One hundred twenty-nine of 182 patients (71%) were aware ED. Twenty-eight patients of them hoped to therapy ED with sildenafil and they were enrolled in this study. Their age was from 33 to 83 year old (mean: 62.3 year old). They were treated with oral sildenafil (50mg) once a time and they had sexual activities 5 times for 4 weeks. They completed the International Index of Erectile Function (IIEF), the International Prostate Symptom Score (IPSS), IPSS-quality of life (QOL) score and uroflow study at baseline and 4 weeks after treatment. The treatment for BPH was not changed during this study. Data analysis was used by Wilcoxon t-test.

Results

Twenty-five of 28 patients (89.3%) was recognized improvement of ED, when they used with a sildenafil. IIEF score was up to 17 from 9.6. Mean IPSS score of them at baseline was 17.7. After the treatment with sildenafil, IPSS score was down to 11.4. There was significant difference by treatment with sildenafil ($P<0.001$). According the analysis of IPSS score, both voiding and storage symptoms were improved. At the same time, IPSS-quality of life (QOL) score was significantly improved ($P<0.001$). However, neither average flow rate nor maximum flow rate were not significantly improved.

Interpretation of results

Many BPH patients were aware ED, and sildenafil was effective for their ED. To treat with sildenafil was also effective to improve subjective voiding symptoms and QOL score. However, voiding symptoms was not objectively improved after the treatment with sildenafil. Sildenafil may not continue to act for relaxation of smooth muscle in bladder, urethra and prostate for long time. It is considered that control study using placebo was needed.

Concluding message

Lower urinary tract symptoms in BPH patients combined with ED were subjectively improved by sildenafil treatment.

References

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Table. Changes of the parameters after the sildenafil treatment

		baseline	After treatment	P
IIEF		9.6	17	
IPSS		17.7	11.4	P<0.001
	Question 1	2.4	1.1	P<0.001
	Question 2	2.5	1.9	P<0.05
	Question 3	2.6	1.5	P<0.01
	Question 4	2.2	0.9	P<0.001
	Question 5	3.7	2.5	P<0.001
	Question 6	1.9	1.3	P<0.05
	Question 7	2.2	1.8	P<0.05
IPSS of QOL		4.4	3.0	P<0.001
Uroflow	AFR	6.5	7.5	N.S
	MFR	12.3	13.2	N.S