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IMPROVEMENT OF NOCTURIA AND SLEEP DISTURBANCE BY SILODOSIN IN MALE LUTS PATIENTS

Hypothesis / aims of study

Male patients with lower urinary tract symptoms (LUTS) often complains symptom of nocturia. Nocturia is one of the most bothersome symptoms in LUTS and related to the patients' quality of life (QOL). Chronic ischemia of detrusor muscle, hyper activation of sympathetic nervous system due to the obstruction by benign prostatic obstruction (BPO) may cause storage symptoms including nocturia. As regarding patients with BPH/LUTS, first-line treatment is alfa-1A blocker. Previous reports showed that non selective alfa-1 blocker, terazosin, and selective alfa-1A/D blocker, tamsulosin, improved the nighttime frequency. Silodosin is the super-selective alfa1A blocker and reported the efficacy for the treatment of LUTS. Nocturia is related to the sleep disorder. Nocturia may induce sleep disturbance, conversely, insomnia may induce nighttime frequency. Our hypothesis is that treatment of nocturia by alfa1A blocker could lead to the improvement of sleep disturbance. In this study, we examined whether silodosin could affect the quality of sleep in patients with sleep disorders and LUTS by both self-questionnaire and actiwatch.

Study design, materials and methods

Total 11 male patients (62-81 years, mean 72.8) with LUTS suggestive BPH and sleep disturbance were enrolled in this study. International prostate symptom score (IPSS), overactive bladder symptoms score (OABSS) and Pittsburgh sleep quality index (PSQI) were used as a subjective questionnaire for LUTS and insomnia. All patients took the usual dosage of 4 mg silodosin twice daily. We evaluated the change of IPSS, OABSS and PSQI after 8 weeks of silodosin administration. The wrist actiwatch was used as an objective measurement tool for insomnia. Patients wore the Actiwatch for 7 days before, and 8 weeks during administration of silodosin.Total sleep time, sleep onset latency, sleep efficiency (SE), wake after sleep onset (WASO), and number of awakenings were measured by actiwatch. Statistical comparisons before and after the administration were made using the Wilcoxon signed rank test. p<0.05 was considered statistically significant.

<u>Results</u>

Total IPSS(16.8 \pm 6.98 vs12.9 \pm 7.93), total OABSS(5.55 \pm 3.45 vs 4.73 \pm 3.32) and total PSQI (8.64 \pm 3.47 vs 6.27 \pm 3.29) were significantly improved after administration of silodosin. QOL index was not significantly improved after administration of silodosin. The category of straining and nocturia in IPSS and the categories of nighttime frequency in OABSS, sleep disturbances in PSQI were also significantly improved. The actiwatch study showed that SE(50.2 \pm 10.4 vs 54.9 \pm 10.4) and WASO(219.0 \pm 67.1 vs189.0 \pm 65.6) were significantly improved.

Interpretation of results

This is the first report to evaluate the quality of sleep after the administration of silodosin. Silodosin improved the nocturia and quality of sleep by subjective questionnaires and objective measurement using actiwatch/

Concluding message

The treatment by silodosin for LUTS suggestive BPH and sleep disturbance may improve not only nocturia but also sleep disturbance.

Disclosures

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