456

Sugimoto S[1], Mashiko A[1], Suzuki Y[1], Yoshizawa T[1], Nagane Y[1], Sato K[1], Mochida J[1], Ichinose T[1], Yamaguchi K[1], Hirano D[1], Uchiyama M[2], Takahashi S[1]
1. *Dept. of Urology, Nihon University,* ***2.*** *Dept. of Psychiatry, Nihon University*

THE LOWER URINARY TRACT SYMPTOMS INFLUENCE THE SLEEP DISORDER

Hypothesis / aims of study
Generally, in the aged people there are many patients with lower urinary tract symptoms (LUTS) and sleep disorder (SD). The nocturnal frequency is the worst impact on the quality of life (QOL) in LUTS. There are many causes of nocturnal frequency including nocturnal polyuria, reduction of nocturnal bladder capacity, SD and so on. However we often wonder whether nocturnal frequency goes ahead of SD. To elucidate the therapeutic target for nocturnal frequency and SD we evaluated the correlation between LUTS and SD.

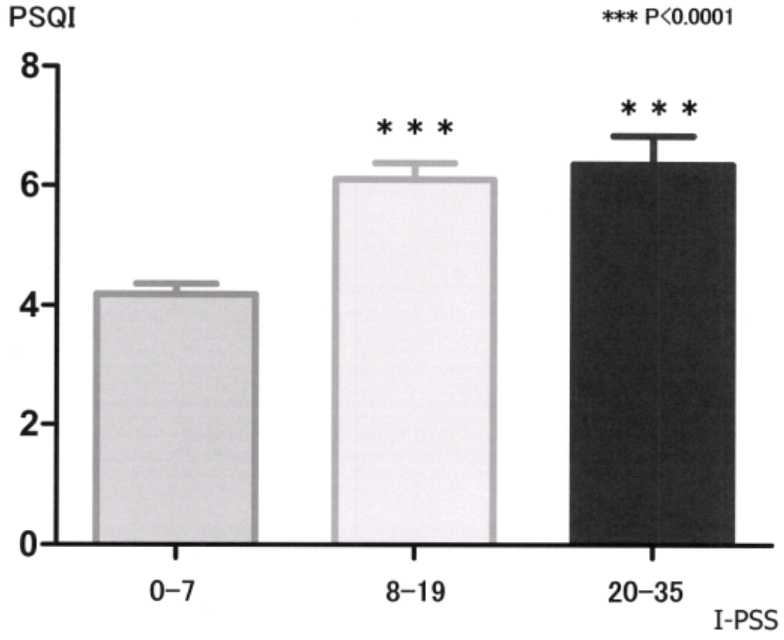
Study design, materials and methods
From October 2007 to February 2007, consecutively 519 new patients were analyzed by some questionnaires and examinations. The LUTS was assessed by International Prostate Symptom Score (I-PSS), Overactive Bladder Symptom Score (OABSS) (Ref. 1), uroflowmetry and residual urine by ultrasound. The sleep disorder was assessed by Pittsburgh Sleep Quality Index (PSQI) (Ref. 2).

Results
Of total 519 mean age was 57.4 years old (range 16 to 93), 314 (60.5%) were male and 205 (39.5%) were female. The sleep quality of old generation was lower than age matched healthy volunteers in Japan. Total I-PSS, OABSS and the nocturnal frequency correlated with PSQI (Spearman's r=0.3025, P=0.0001, r=0.2301, p=0.0014 and r=0.2152, P<0.0001, respectively). The patients of serious and mild score in I-PSS (20~35 points and 8~19 points) were significantly higher PSQI than the patients of slight score (0~7 points) (p<0.0001 and p<0.0001, respectively) (Fig. 1). The patients with overactive bladder (OAB) were higher PSQI than non OAB patients (p=0.0013) (Fig. 2).

Interpretation of results
The results of the present study have revealed that not only storage symptoms but voiding symptoms got worse sleep quality. The improvement of LUTS results in the reduction of SD.
When 3 to 2 times decreased in the number of nocturnal frequency, the sleep quality and efficiency were significantly improved (p<0.05 and p<0.001, respectively) (Fig. 3).

Concluding message
Using α1-blocker and/or anticholinergic agent for LUTS treatment, resulting in 3 to 2 times decreased in nocturnal frequency, the sleep quality and efficiency may be changed for better.

Fig. 1



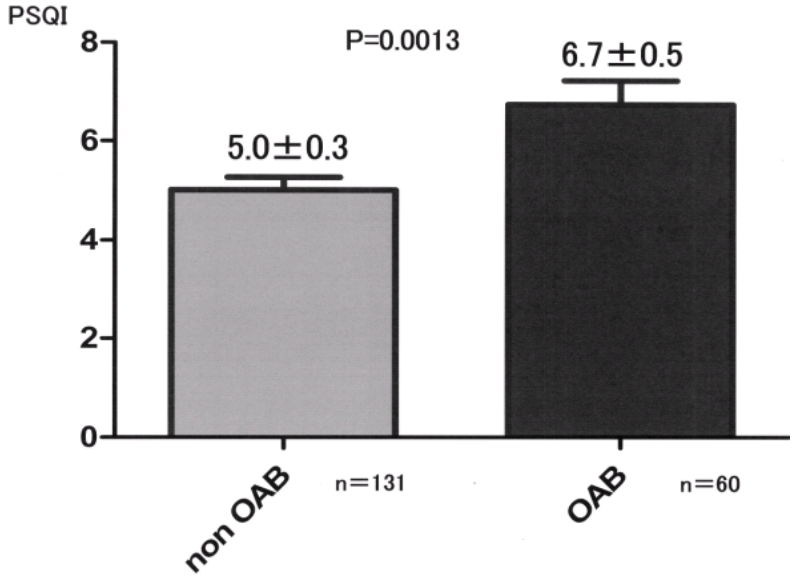


Fig. 2

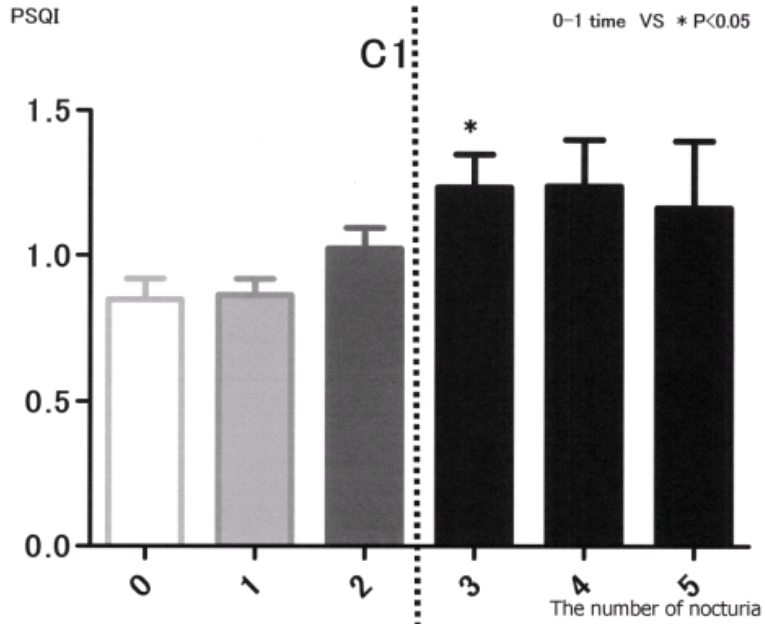


Fig. 3

References

1. Homma Y at al, Symptom assessment tool for overactive bladder syndrome--overacive bladder symptom score. Urology, 68: 318-323, 2006
2. Buysse DJ at al, The Pittsburgh Sleep Quality Index; a new instrument for psychiatric practice and research. Psychiatry Res 28: 193-213, 1989

Specify source of funding or grant	**no funding nor grant**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**The ethics committee, Nihon University School of Medicine**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**