

## CHANGES IN SLEEP PATTERN, PSYCHOLOGICAL PROFILE AND QUALITY OF LIFE AFTER TREATMENT OF NOCTURIA IN MALE PATIENTS WITH LOWER URINARY TRACT SYMPTOMS

### Hypothesis / aims of study

Nocturia is one of the most bothersome symptoms in the male patients with lower urinary tract symptoms (LUTS). It can negatively affect daytime activities by lack of sleep causing degradation of quality of life. This study aims to examine changes in sleep pattern, psychological profile and quality of life after treatment of nocturia in male patients with LUTS.

### Study design, materials and methods

50 male patients with one or more episodes of nocturia, who had been treated at our department from January 2008 to October 2010 were retrospectively studied. The following surveys were performed before treatment: the International Prostate Symptom Score (IPSS); Pittsburgh Sleep Quality Index (PSQI), Berlin Questionnaire (BQ) and Restless Leg Syndrome (RLS) for assessing sleep and quality of life; and Hospital Anxiety and Depression Scale (HADS) to investigate psychological profile. After treatment of nocturia, changes in sleep pattern, psychological profile and quality of life were compared by repeating the surveys. All data were analyzed with paired t-test.

### Results

The average age of the patients was 67.7±8.0 years (49 - 88), and the average duration of medication was 5.3±3.2 months. The episodes of nocturia (2.4±1.1 vs 1.4±0.9) were significantly decreased after treatment ( $p<0.001$ ). IPSS scores were all significantly improved after treatment of nocturia ( $p<0.001$  for every category): total score (1.40±0.69), storage subscore (2.62±3.50), voiding subscore (3.98±6.12) and QoL score (6.60±8.30). The 'Subjective sleep quality' (0.85±1.06,  $p<0.001$ ), 'Use of sleeping medication' (0.45±1.10,  $p<0.01$ ), 'Daytime dysfunction' (0.45±0.88,  $p<0.01$ ) categories of PSQI showed significant differences after treatment. But the remaining categories of PSQI, HADS, BQ and RSL scores did not show any significant improvement after treatment.

### Interpretation of results

In male patients with LUTS, the treatment of nocturia improves quality of sleep including improvement of 'Subjective sleep quality', decreased 'Use of sleeping medication' and improvement in 'Daytime dysfunction'. However, there are no changes in the psychological profiles like anxiety and depression.

### Concluding message

In male patients with LUTS, the treatment of nocturia improves quality of sleep, but does not affect psychological state.

<b>Specify source of funding or grant</b>	<b>None</b>
<b>Is this a clinical trial?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>IRB of CMC (Catholic Medical Center in Korea) PC11EISE0009</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>