

## Dynamics of body weight and mental state of obese patients depending on the associated sleep disorders

Natalia Strueva<sup>1</sup>, Gegel N. V<sup>3</sup>, Poluektov M. G<sup>2</sup>, Saveleva L.V<sup>1</sup>, and Melnithenko G. A<sup>1</sup>

<sup>1</sup>Endocrinology Research Center, Russia

<sup>2</sup>First Moscow State Medical University, Russia

<sup>3</sup>Moscow Research Institute of Psychiatry, Russia

**Aims:** Alimentary obesity has a strong comorbidity with sleep disorders. The aim of this research was to estimate the correlation between insomnia and mental disorders among the obese patients.

**Materials and Methods:** 123 patients (51 males and 72 females, age 40.0±11.5; body mass index (BMI) 39.8±8.7 kg/m<sup>2</sup>) with obesity were included in this study. Patients were divided in two groups: first group consisted from 55 patients with insomnia complaints, second (controls)-68 patients without insomnia. Questionnaire survey of patients was conducted to check their estimates of sleep quality. Psychological features were assessed with the Minnesota Multiphasic Personality Inventory (MMPI) and Hospital Anxiety and Depression Scale (HADS). Mental disorders were diagnosed clinically according to ICD-10 criteria.

**Results:** Subjective problems with quality of sleep were observed in 76%, snoring in 63%, hypersomnia symptoms in 55%, features of sleep apnea in 50%, and insomnia signs in 45% of patients. Insomnia intensity significantly correlated ( $p < 0.03$ ) with dysthymia and mild depressive episode. According to data of psychological testing, obese patients with insomnia had high levels of health anxiety, somatization, depression, displacement and high susceptibility to mental stress. Mean levels of anxiety and depression by HADS were significantly higher in patients with insomnia comparing ones without insomnia ( $8.8 \pm 4.4$ ;  $6.5 \pm 3.2$  vs.  $7.3 \pm 2.8$ ;  $5.7 \pm 2.5$ ,  $p < 0.01$ ). Patients of the first group more frequently had clinical anxiety and subclinical depression ("Chi-square" ( $\chi^2$ )=9.82;  $p < 0.001$  and  $\chi^2=6.98$ ;  $p < 0.008$  respectively). Clinically significant weight loss (5% or more of the initial) after 6 months of combined treatment was achieved more frequently in patients without insomnia comparing ones with insomnia ( $\chi^2=4.91$ ;  $p < 0.03$ ).

**Conclusion:** sleep disorders associated with latent or evident psychopathology affect the extent of weight loss in obese patients.

### Biography

Natalia Strueva has graduated the Russian National Research State University of Medicine with honors at the age of 25 years. Now, she is a postgraduate student in the Russian Endocrinology Research Center. The subject of her research work is the problem of obesity and the sleep disorders particular. Her scientific supervisors are Prof. Dr. Melnithenko G. A. and Assoc. Prof. Poluektov M. G.

nstr84@mail.ru