

THYROID HORMONE LEVELS AND TSH ACTIVITY IN PATIENTS WITH OBSTRUCTIVE SLEEP APNOEA SYNDROME

Piotr Bielicki, Tadeusz Przybylowski, Marta Kumor, Małgorzata Barnas, Magdalena Wiercioch, Ryszarda Chazan

Department of Internal Medicine, Pneumonology and Allergology, Medical University of Warsaw, Poland

Background: Obstructive sleep apnoea syndrome (OSAS) is characterized by apnea or hypopnoea with increased respiratory muscle activity which is repeatedly observed during sleep. Hypothyroidism has been described as a rare cause of OSAS, however, this condition is considered to be the main cause of breathing disorders during sleep, in patients in whom an improvement of OSAS is observed after thyroid hormone replacement therapy. However, euthyreosis due to thyroxine replacement in patients with OSAS often does not lead to improvement in breathing disorders and in these patients CPAP treatment is usually applied. The aim of this study was to assess thyroid function in patients with OSAS examined in the Sleep Laboratory of our Department.

Methods: We studied 813 patients in whom severe OSAS was diagnosed; the mean AHI was 44. Most of the patients were obese (mean BMI 33.1 ± 6.6 kg/m²) and had excessive daytime sleepiness (ESS 12.8 ± 6.6).

Results: Lowered thyroid function was noted in 38 patients. Thirty one patients had laboratory features of hyperthyroidism. With the TSH concentration as the major criterion, hypothyroidism was diagnosed in 38 (4.7%) and hyperthyroidism was diagnosed in 31 (3.8 %) patients, respectively. Analysis of the basic anthropometric data, selected PSG results, and TSH, fT3 and fT4 values did not reveal significant correlations.

Conclusions: The incidence of thyroid function disorders seems to be no different than that in the general population. We did not find correlations between TSH activity and the severity of breathing disorders during sleep.