Body mass analysis in patients with Hashimoto thyroiditis

Popławska-Kita A.[1*], Siewko K.[1], Telejko B.[1], Kościuszko-Zdrodowska M.[1], Hryniewicka J.[1], Szelachowska M.[1], Milewski R.[2], Górska M.[1]

[1]Department of Endocrinology, Diabetology and Internal Medicine, Medical University of Białystok, Poland
[2]Department of Statistics and Medical Informatics, Medical University of Białystok, Poland

ABSTRACT

Introduction: Hashimoto thyroiditis (HT) is one of the most common autoimmune thyroid disorders and o the most common cause of hypothyroidism, but the relation between TSH and body mass is still unclear.

Material and methods: The group studied consisted of 53 patients with HT in euthyreosis and 28 healthy individuals. All the patients underwent thyroid ultrasonography and body mass analysis with the use of a medical analyzer INBODY 200. Blood samples were also analyzed for TSH and anti-thyroid antibodies.

Results: The patients with HT had higher body mass (p=0.008), body mass index (BMI) (p=0.02), Waist-Hip Ratio (WHR) (0.01) and fat mass (p=0.02) than had the controls. In HT group increased body mass was observed in 72% of the patients (overweight in 38% and obesity in 35% of them), as compared with 38% of overweight/obesity in the control group. Thyroid volume was significantly lower (p=0.01) and anti-peroxidase antibodies level was two times higher in the group with the treatment period > 2 years, but the patients with relatively short treatment period were 7 kg heavier and their fat mass was 6 kg higher than in the subjects treated longer than 2 years.

Conclusions: Our results suggest that the patients with HT, even in euthyreosis, have significantly higher body mass, BMI, WHR and fat mass than healthy individuals, which is probably associated with previous disturbances that led to the increase in fat mass at the stage of hypothyroidism. The observed changes tend to normalize during L-thyroxine replacement therapy.

Key words: Thyroid, thyroiditis, body mass index, thyrotropin.