

Thyroid functioning, adipocytokines, bone turnover and vitamin D - review of literature

Koszowska A.^{1,5 A,D*}, Brończyk-Puzoń A.^{2,5 B}, Dittfeld A.^{3,6 B,D}, Nowak J.^{1,5 E}, Kulik-Kupka K.^{4,5 B}, Zubelewicz-Szkodzińska B.^{5 F}

1. Doctoral Study in the School of Pharmacy with the Division of Laboratory Medicine in Sosnowiec, Medical University of Silesia, Poland
2. Doctoral Study in the School of Health Sciences in Katowice, Medical University of Silesia, Poland
3. Doctoral Study in the School of Medicine with the Division of Dentistry in Zabrze, Medical University of Silesia, Poland
4. Doctoral Study in the School of Public Health in Bytom, Medical University of Silesia, Poland
5. Department of Nutrition Related Prevention, School of Public Health in Bytom, Medical University of Silesia, Katowice, Poland
6. Department of Histology and Embryology, School of Medicine with the Division of Dentistry in Zabrze, Medical University of Silesia, Poland

A - Conception and study design, B - Data collection, C –Data analysis, D - Writing the paper, E – Review article, F - Approval of the final version of the article

ABSTRACT

The most common public health problems include, among others, overweight, obesity, and cardiovascular diseases. In addition, the number of people with thyroid disturbances is still growing. Thyroid abnormalities can lead to many metabolic dysfunctions, including secondary osteoporosis, alterations in body mass, lipid profile, and insulin resistance. Recently, the studies have been focused on the connections between thyroid gland function, obesity, metabolic syndrome and cardiovascular diseases, as well as bone turnover. Fatty tissue plays an important role in whole body homeostasis. Adipose tissue hormones, such as leptin, resistin and adiponectin are proteins having immunomodulatory

properties, and their balance is needed to control immune response, as well as inflammation processes. The following article constitutes a review of literature concerning thyroid function with regard to adipocytokines and vitamin D, as well as the influence of this gland on the skeletal system. For this purpose, Medline Pub Med base and Google Scholar were used. All the cited studies in this review article underline how much should be done to achieve more efficient treatment of thyroid disorders, specifically, how to prevent its complications, for instance, osteoporosis, overweight, obesity or cardiovascular diseases.

Key words: Thyroid gland, obesity, adipokines, vitamin D

DOI: 10.5604/01.3001.0010.1921