

ABSTRACT

Title:

The effects of thyroid gland functional disorders upon muscular mass parameters and bone mineral density (BMD).

Purpose:

The purpose of the research has been to monitor alterations in muscular strength, in muscular and adipose tissue parameters established by densitometry, bone mineral density, and blood parameters of thyroidal functions from thyroid gland functional disorder diagnosis to expected full functional compensation upon completion of 12-month monitoring.

Method:

The examined set consisted of two groups of female patients treated during the period of 2005-2007 in the outpatient endocrinology ward of DC MEDISCAN-Euromedic for thyroid dysfunction. The major research method has been densitometry (establishing the parameters of density of bones and soft tissues by bone densitometer), and a measurement of muscular strength using a device.

Results:

Our research has confirmed that the compensation of thyroid gland hyperfunction is associated with a relatively rapid increase in body weight in the female patients. In female patients with thyreotoxicosis, effective treatment is associated with a significant increase in muscular strength. In female patients with thyroid gland hypofunction, no significant alterations in weight and muscular strength have been reported in the course of the first year of compensation. The start of effective treatment of thyreotoxicosis is associated with an adjustment in proximal femur BMD values (Total Hip) to the level of values seen in patients with hypothyroidism.

Key words:

Thyroid gland functional disorder and quality of life; alternations in bone mineral density and muscular strength; manual myometry; densitometry.