Association between free thyroid hormones values and the lipid profile in middle-aged women with chronic symptoms (Article)

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Aims: To determine the association between the thyroid hormones (FT3, FT4 and TSH) and the lipid profile markers (HDL-c, LDL-c and triglycerides) values in middle-aged women with no metabolic disorders and recurrent chronic symptomatology. Materials and Methods: We carried out an analytical cross-sectional study in euthyroid women with recurrent chronic symptoms of at least six months with no apparent diagnosis who attended the endocrinological gynaecology outpatient service of a private clinic in Lima-Peru during 2012–2014. Participants who met the eligibility criteria were evaluated according to their thyroid hormones (FT3, FT4 and TSH) and lipid profile markers (HDL-c, LDL-c and triglycerides) values. We elaborated univariate/multivariate linear regression models to evaluate the association between the thyroid markers and the lipid profile levels. The reported association measure was the beta coefficient (β) with its respective p-value. Results: We analyzed 211 participants, the average age was 44.9 ± 14.0 (SD) years, the FT3 and FT4 mean levels were 3.2 ± 0.4 pg/mL and 1.2 ± 0.2 ng/dL respectively, while the TSH median was 2.8 (IQR:1.9–4.0) μU/mL. The mean or median levels of LDL-c, HDL-c and triglycerides were of 137.5 ± 37.9 mg/dL, 54.0 ± 15.0 mg/dL and 118.5 (IQR:79.5–169.5) mg/dL respectively. In the multivariate linear regression model between the FT3 and LDL-c levels, we found that for each increase in a FT3 unit, the LDL-c values decreased on average 30.85 mg/dL (p < 0.01). We found no statistically significant associations in the other multivariate models of linear regression, among the other thyroid hormones and lipid markers. Conclusion: We found an inverse association between the FT3 and LDL-c values in women with chronic gynaecological symptoms. © 2018 Diabetes India