Endocrinología y Nutrición

195 - DHA-rich fish oil supplementation improves body composition without influence of PPAR-gamma Pro12Ala polymorphism in patients with type 2 diabetes

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Resumen

Introduction: The aims of this research were to investigate (1) the impact of DHA-rich fish oil supplementation on body composition, plasma adiponectin level, and PPARγ gene expression; (2) whether the effect of DHA-rich fish oil supplementation on the aforementioned variables is modulated by PPARγ Pro12Ala polymorphism.

Methods: We genotyped PPARγPro12Ala polymorphism in subjects with T2DM.Ala carriers and non-Ala carriers were randomly assigned to DHA-rich fish oil or placebo intake for 8 weeks.

Results: Glycemic control was not affected by the intervention. The supplementation with DHA-rich fish oil decreased WC ($p \leq 0.001$), body fat mass ($p = 0.01$), body fat percent ($p = 0.04$), and visceral fat rating ($p = 0.02$) as well as trunk fat mass ($p = 0.04$). Weight, BMI, fat free mass, Adiponectin level and PPARγ gene expression changes showed no significant difference. No gene-diet interaction was found on body composition, adiponectin level and PPARγ gene expression.

Conclusions: DHA-rich fish oil supplementation favorably modulated body composition in patients with type 2 diabetes, and could be useful to reduce visceral obesity. However, the PPARγ Pro12Ala polymorphismdid not influence the changes in the desired variables.