ABSTRACT

Title of Abstract : FTO rs9939609 Genotypes: Impact on Body Composition and Inflammatory Markers Related to Cardiovascular Risk
Authors of Abstract : Putri Novitasari12, Rimbawan Rimbawan1*, Hardinsyah Hardinsyah1, Hadi Riyadi1
Affiliation : Others
Correspondence E-mail : rimbawan@apps.ipb.ac.id

Background : Obesity is a significant global health issue, contributing to the prevalence of chronic diseases. Genetic factors such as the Fat-Mass Obesity-Associated (FTO) gene, particularly the rs9939609 variant, have been linked to increased susceptibility to obesity.

Objective : This study examines the relationship between FTO rs9939609 genotypes (TT and AA/TA) and body composition, as well as markers of inflammation, in obese individuals.

Research Methods/ Implementation Methods : Using a cross-sectional design, 38 obese young women aged 18-25 years from Bandung City were included. Anthropometric measurements were taken, and blood samples were analyzed for interleukin-6 (IL-6), high-sensitivity C-reactive protein (hs-CRP), and adiponectin (ADP) levels.

Results : The findings indicate that the AA/TA variant group showed lower mean values for weight, body mass index, waist and hip circumferences, visceral fat, fat percentage, resting metabolic rate, and subcutaneous fat than the TT group; however, these differences were not statistically significant. Additionally, the AA/TA group displayed slightly higher waist-to-hip ratios and skeletal muscle percentages, although these differences were also non-significant. These results contrast with previous studies, suggesting the influence of the FTO gene on obesity may vary based on population and other contributing factors. No significant differences in body composition or biochemical markers were observed between the FTO rs9939609 genotypes.

Conclusion/Lesson Learned : The limited sample size and focus on a single demographic may have impacted the findings. Future research should involve a larger and more diverse sample, including individuals with various nutritional statuses, to enhance comparison and increase the reliability of the results.

Keyword : Fat Mass Obesity-Related, Obese Women, Body Composition, Inflammation