

Postprandial Satiety, Sweets Intake, Physical Activity, and Depressive Symptoms in Relation to Rs9939609 Polymorphism of the FTO Gene

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Abstract : Background: The fat mass & obesity-associated (FTO) gene is linked to an increased risk of obesity. However, the relation between rs9939609 and eating behaviors or energy expenditure is not fully elucidated. The aim of this study was to investigate the relationship between the rs9939609 polymorphism of the FTO gene and the postprandial satiety, sweets intake, physical activity and depressive symptoms in patients with obesity. Methods: The study group consisted of 585 subjects with a BMI of 42.9–70.0 kg/m². The rs9939609 polymorphism of the FTO gene was examined using real time - PCR method. The severity of depressive symptoms was assessed with the Beck Depression Inventory (BDI-II). Information was obtained about demographics, eating habits and lifestyle. Results: More than half (63.5%) of the patients reported consumption of sweets between main meals and 30% declared high and very high postprandial satiety and the frequency of TA/AA carriers in rs9939609 (FTO) compared with TT carriers was similar. Significantly lower BDI-II scores were found in subjects with higher level of physical activity and it was seen amongst patients with the AA and AT genotypes of the FTO rs9939609 polymorphism. Conclusion: Obesity is a highly heritable trait, but eating habits also appear as major factors affecting obesity development.

Keywords : FTO polymorphism, physical activity, obesity, depression, postprandial satiety, sugary foods, sweets

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