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FTO and food intake in female adolescents

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Objective of our study is to find the association between polymorphism FTO rs9939609 and intake of proteins, fats and carbohydrates in Caucasian female adolescents living in Eastern Siberia (Russia). A total of 122 female adolescents aged 14-17 including 58 with normal weight (BMI=22.3±1.89 kg/m²), 37 with overweight (BMI=27.4±1.59 kg/m²) and 27 with obesity (BMI=34.5±4.94 kg/m²) were recruited. All subjects were fed with food and dairy for 3 days. Later we calculated the amount of proteins, fats, carbohydrates and total calories per day. DNA extracted from blood was used as the biological material. The FTO rs9939609 genotyping was performed on DT prime (DT-96) Real-time cyler by kit "Lytech". Statistical analysis was performed by soft "STATISTICA8.0". We estimated calorie, protein, fat and carbohydrate intake in total sample. The subjects with A-allele (AA and AT genotype) had 3892.4 kcal per day, the subjects with TT genotype had 4232.7 kcal per day (p=0.432). Regarding protein intake the subjects with A-allele (AA and AT genotype) had 158.7 kcal per day and the subjects with TT genotype had 167.4 kcal per day. Fat intake was 160.5 kcal per day in subjects with A-allele and 141.1 kcal per day in subject with T-allele. We found significant association with decrease of protein intake between AA, AT and TT genotype (p=0.0133; p=0.023) and association between A-allele and increase of fat intake (p=0.0128). Thus, FTO rs9939609 doesn't affect on total increase of calorie intake, but there is an association A-allele with decrease of protein intake and increase of fat intake.

Biography

Kseniia levleva has completed her graduation from the faculty of Medical Biochemistry at Irkutsk State Medical University in 2014. In summer 2015, she got her certificate of Doctor of Laboratory. Currently, she is pursuing her Post-graduate studies at Scientific Centre for Family Health Problems and Human Reproduction.

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