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6FLHQWLÄF FHQWHU IRU IDPLO\ KHDOWK DQG KXPdq UHSURGXFWLRQ SUREOHPV 5XVVLDQ)HG

Statement of the Problem: Among the causes of obesity an important role is played by the heredity. The *FTO* is one of the genes associated with obesity and body mass fat. And polymorphism rs9939609 of this gene located in the first intron (the code is W=A/T) appears the most significant.

Methodology & Theoretical Orientation: The study included total of 128 Caucasian female adolescents (average age 15.86±1.02) living in Eastern Siberia (Irkutsk region, Russia). SDS BMI, % of body mass fat was measured. 59 girls were included in group with normal weight (SDS BMI 0.84±0.55) and 69 girls were included in group with overweight and obesity (SDS BMI 2.52±0.72). Genomic DNA was extracted from EDTA-treated whole blood by commercial kits (DNA-Sorb-B, AmpliSens, Russia). Genotyping of the *FTO* rs9939609 was performed using polymerase chain reaction in real time with DT-Prime cyclor (DNA-technology, Russia). Statistical analysis was performed by software "STATISTICA8.0".

Findings: A-allele frequency was 40% in control group and 49% was in group with overweight and obesity ($p=0.223$). Comparisons of SDS BMI and percent of body mass fat stratified by *FTO* rs9939609 genotypes are shown in table 1. We found the significant increase of SDS BMI in carriers of A-allele in group with overweight and obesity. There is no association in group with normal weight.

Conclusion & Significance: