

Section PHYSIOLOGICAL ANTHROPOLOGY

OXYTOCIN RECEPTOR GENETIC VARIATION, FERTILITY AND DESIRE FOR PARENTING IN RURAL KHANTY AND MANSI OF WESTERN SIBERIA

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There is a growing evidence of the role of oxytocin receptor gene polymorphism in attachment, pair-bonding and cooperation (Bakermans-Kranenberg, van Ijzendoorn, 2008; Feldman et al., 2010; Gordon et al., 2010). The goal of this study was to test how a SNP polymorphism (rs53576) of the oxytocin receptor gene relates to fertility and parental efforts in rural sample of Khanty and Mansi from Khanty-Mansijsky Autonomous District, Berezovsky and Belojarsky regions. Demography, anthropometry, psychological data and buccal smears for DNA extraction were collected among a traditional fishermen population of Khanty and Mansi. The sample size consists of 182 adult individuals (95 men and 87 women) with the age range from 17 to 70 years (median 38 years). The SNP polymorphism for rs53576 was genotyped, using TaqMan SNP Genotyping Assays. The distribution of genotypes in our sample was: 35.7% AA; 45.1% AG; 13.7% GG. At first, we tested the association of these genotypes with the number of children born in both sexes, but found no significant result. Next, we examined a female sample exclusively and conducted linear regression analyses with the number of pregnancies and abortions as dependent variables, and age and genotype as independent variables. Significant effects were revealed for both predictors. Women, carriers of the AA genotype had significantly more pregnancies ($R^2 = 0.479$, $\beta = 0.202$, $t = 2.471$, $p < 0.016$), as well as abortions ($R^2 = 0.305$, $\beta = 0.238$, $t = 2.530$, $p < 0.013$), compared to the AG and GG genotypes. These findings are discussed in line with the data on the role of oxytocin in empathy and stress reactivity. Supported by RFBR, grant 13-06-00393a.

Key words: *oxytocin receptor gene polymorphism, parenting, Khanty–Mansi, reproduction*

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