

MAOA and MAOB polymorphisms and anger-related traits in suicidal participants and controls.

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Abstract

MAOA and, to a lesser extent, MAOB polymorphisms have been related to aggression traits and suicidality. We aimed to investigate the role of MAOA and MAOB in suicidal versus non-suicidal participants and interactions between genetic variation and suicidal status on aggression and anger-related traits. The sample was composed of three groups: one group of suicide attempters (n = 171, males 35.1 %), one group of suicide completers (n = 90, males 57.8 %) and a healthy control group (n = 317, males 43.8 %). We examined the following markers: MAOA rs909525, rs6323, and rs2064070, and MAOB rs1799836. Anger traits were measured with the state-trait anger expression inventory (STAXI) and aggression traits with the questionnaire for measuring factors of aggression (FAF). Associations were separately examined for males and females. Variation in the three MAOA variants was associated with higher levels of anger expressed outwards (STAXI "anger-out" subscale) in male suicidal patients compared to controls (p < 0.001). In females, the C allele of rs6323 showed higher scores on the same subscale ("anger out") (p = 0.002). Allele frequencies of the MAOA rs909525 were associated with suicidality (p < 0.007). Our findings show an association between genetic variation in three polymorphisms of the MAOA and anger traits in suicidal males and one replication for the functional variant rs6323 in females. This relationship was stronger than a direct genetic association with suicide status. Future studies incorporating endophenotypic measures of anger and aggression in suicidal participants are warranted.