

Increased Cyp2d6-cyp2c19 Metabolic Capacity: Relation to Suicide Attempt Severity as Measured by the Beck Sis-objective Circumstances.

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Introduction: CYP2D6 and CYP2C19 are involved in the metabolism of widely used antidepressants and other drugs with psychotropic activity. They also participate in the metabolism of endogenous substrates, and are expressed in the brain.

Objectives and Aims: This study examined, for the first time, whether a high CYP2D6-CYP2C19 metabolic capacity combination increases the likelihood of suicidal intent severity in a large study cohort.

Methods: Survivors of a suicide attempt (n=587; 86.8% women) were genotyped for CYP2C19 (*2, *17) and CYP2D6 (*3, *4, *4xN, *5, *6, *10, wtxN) genetic variation and evaluated with the Beck Suicide Intent Scale (SIS).

Results: Patients with a high CYP2D6-CYP2C19 metabolic capacity showed an increased risk for a severe suicide attempt (P<0.01) as measured by the SIS-objective circumstance subscale (odds ratio (OR)=1.37; 95% confidence interval (CI)=1.05-1.78; P=0.02). Importantly, the risk was greater in those without a family history of suicide (OR=1.82; CI=1.19-2.77; P=0.002).

Conclusions: Further research is warranted to evaluate whether the observed relationship is mediated by the role of CYP2D6 and CYP2C19 involvement in the endogenous physiology or drug metabolism or both.

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