Dopamine transporter availability cognitive function in different subgroups of alcohol dependence
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The dopamine transporter (DAT) plays a crucial role in the pathogenesis of alcohol dependence (AD) and major depression (MD), and males have more risk factors for the development of AD. However, imaging studies on brain DAT availability in males with AD comorbid with MD (AD/MD) are limited, and the association of DAT availability with cognitive function and depressive scores in patients with AD/MD has not been analyzed. Hence, this study examined the relationship between brain DAT availability, cognitive function and depressive symptoms in different subgroups of males with AD.

Single photon emission tomography imaging with \textsuperscript{99m}Tc\textsuperscript{3}TRODAT-1 as a ligand was used to measure striatal DAT availability in 49 patients with AD (28 pure AD and 21 AD/MD) and 24 age- and sex-matched healthy volunteers. The Wisconsin Card Sorting Test (WCST) and 17-item Hamilton Depression Rating Scale were used to assess neurocognitive function and depressive scores, respectively. Patients with AD showed a significant reduction of DAT availability in three brain regions ($p < 0.001$), and this reduction was more pronounced in the pure AD patients compared to healthy controls. The patients with AD showed significantly poorer performance on the WCST, but only in the control group was DAT availability significantly negatively correlated with total errors and perseverative errors ($p < 0.001$).