

Clinical Implications of White Matter Lesions in Overweight Male Individuals with Bipolar Disorder

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Introduction:

Cerebral white matter lesions (WML) have been found in normal aging, vascular disease and several neuropsychiatric conditions. Correlations of volumetric measured WML with clinical parameters in men with Bipolar Disorder (BD) have been described in a currently submitted work of our study group. As we try to elucidate common pathways between obesity/metabolic syndrome and BD we reinvestgated our data in the context of obesity.

Methods:

In a cross-sectional study 100 euthymic individuals (52 male, 48 female) with BD were enrolled to undergo brain magnetic resonance imaging using 3T including a FLAIR sequence for volumetric assessment of WML-load using FSL-software. Additionally, clinical characteristics and psychometric measures including Structured Clinical Interview according to DSM-IV were evaluated. Partial correlation analysis (WML-load with lifetime number of manic/depressive episodes) were performed in 4 different groups (male normalweight, male overweight/obese, female normalweight, female overweight/obese)

Results:

In overweight/obese men only (n=41), the number of manic/hypomanic episodes ($r=0.85$; $p<0.001$) as well as depressive episodes ($r=0.55$; $p<0.001$) correlated positively with WML-load.

Conclusions:

WML-load strongly correlated with the number of manic episodes in overweight male BD patients, suggesting that overweight men might be more vulnerable to mania in the context of cerebral white matter changes.