INSULIN SENSITIVITY, PRO-INFLAMMATORY MARKERS AND ADIPONECTIN IN YOUNG MALES WITH DIFFERENT SUBTYPES OF DEPRESSIVE DISORDER

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BACKGROUND: To evaluate insulin sensitivity, pro-inflammatory markers and adiponectin concentration in young males with different subtypes of depressive disorder.

METHODS: Non-obese young males with depressive disorder (age between 18 and 30 years; body mass index, BMI ≤ 25 kg/m²) were recruited and classified as reactive (RD, n=12), major (MD, n=21) and bipolar depression (BD, n=13) based on the criteria of DSM-IV. Twelve subjects were enrolled in the study, with age- and BMI-matched healthy males as controls. Plasma C-reactive protein (CRP), adiponectin, tumor necrosis factor-α (TNF-α) and interleukin-6 (IL-6) were determined. All of the participants received a 75-g oral glucose tolerance test (OGTT). Insulin sensitivity and β-cell function were calculated using the frequently sampled intravenous glucose tolerance test (FSIGT).

RESULTS: Compared with the control group, insulin sensitivity (SI) was significantly lower in MD and BD (0.78±0.09 and 0.75±0.09 vs. 1.09±0.08 ×10⁻⁵ min⁻¹/pmol; p<0.05, respectively). Acute insulin response (AIR) to intravenous glucose was enhanced in BD compared with controls and RD (6079.9±841.8 vs. 3339.8±356.4 and 3494.8±337.7 pmol; p<0.05, respectively). There were remarkable differences in plasma adiponectin between the control and RD and BD (9.07±0.54 and 9.38±0.46 vs. 7.41±0.45 μg/mL; p<0.05 and p<0.01, respectively).

CONCLUSIONS: We concluded that there was an intrinsic relationship between depression and insulin resistance in non-obese young males, especially among those with major and bipolar depression.

Keyword: Insulin sensitivity, Pro-inflammatory Markers, Adiponectin