

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 (S_I) was significantly lower in MD and BD (0.78 ± 0.09 and 0.75 ± 0.09 vs. $1.09 \pm 0.08 \times 10^{-5}$ 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 μ g/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