

The biphasic changes of insulin secretion in schizophrenic patients treated with olanzapine

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摘要

Abstract

The object of this study was to evaluate the time course of effects of olanzapine treatment on pancreatic β -cell function in second generation antipsychotics-naïve patients with schizophrenia. Thirty-six schizophrenic subjects received olanzapine therapy for 8 weeks and 31 of them completed the trial. The metabolic parameters were quantitatively assessed at weeks 0, 2, 4 and 8 by the intravenous glucose tolerance test. After 56-day olanzapine treatment, subjects had significant increases in body weight, insulin resistance, β -cell function and the levels of triglyceride and low-density lipoprotein. Insulin secretion significantly decreased at week 2, returned to baseline at week 4 and significantly increased at week 8. Female subjects were more vulnerable to the olanzapine-induced metabolic adversity than male subjects. Of the total sample, 16.1%, 22.6% and 3.2% of them met the criteria for significant weight gain, metabolic syndrome and diabetes mellitus, respectively. This study indicates that olanzapine-treated schizophrenic patients displayed biphasic changes in insulin secretion to a hyperglycemic challenge. The results of this study support that olanzapine might directly influence pancreatic β -cell function.