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Effect of Melatonin in Reducing Second-Generation Antipsychotic Metabolic Effects: A Double Blind Controlled Clinical Trial

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Abstract

Introduction: The use of second-generation atypical antipsychotics has an increasing role in the development of metabolic syndrome. However, these medications due to metabolic disorders can lead to an increased risk of cardiovascular disease and subsequently mortality as well as reduced adherence to treatment. The main objective of current study was to determine the ability of melatonin to reduce the metabolic effects of second-generation antipsychotics.

Methods: This double blind controlled clinical trial was conducted on 100 patients aged 18 to 64 years old were treated with the second-generation antipsychotics for the first time. The patients were divided randomly into two groups of 50. The case group received slow-release melatonin at a dose of 3 mg and the control group was given oral placebo at 8 pm.

Results: The findings in melatonin group indicated significantly increase of HDL and decreased fasting blood sugar and systolic blood pressure, as well as had statistically significant increase in waist circumference, weight and BMI compared with placebo group.

Conclusion: According to the findings, it can be claimed that the addition of melatonin to atypical antipsychotics has led to a reduction in some of the metabolic effects of these drugs. In this study, HDL level was increased, and the mean systolic blood pressure and FBS were decreased in the melatonin group. Considering that these factors are contributing to cardiovascular disease as a leading cause of mortality in psychiatric patients, so the use of melatonin can reduce some of the medical effects of long-term treatment of atypical antipsychotics.

Keywords: Second-Generation Antipsychotic Drugs; Melatonin; Metabolic Disorders.

Introduction

The second-generation antipsychotics (SGAs) are a group of medications introduced to clinical psychiatry in the early 1990s. The SGAs are currently the most prescribed drugs for schizophrenia and other psychosis-related illnesses in most parts of the world. These drugs are

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