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Diabetes mellitus in patients with schizophrenia in West-Bank, Palestine

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ABSTRACT

Aims: The main aims of the study were to investigate the prevalence of pre-diabetes and diabetes mellitus (DM) in patients with schizophrenia, to compare it with those published in the general population, and to assess significant associations with dysglycemia defined as having either pre-DM or DM.

Methods: A cross-sectional study carried out in 4 governmental primary psychiatric health-care centers in Northern West-Bank, Palestine. Fasting blood glucose (FBG) and glycated hemoglobin (HbA1c) were measured. The World Health Organization (WHO) criteria for defining pre-DM and DM were used. Dysglycemia was defined as FBG >110 mg/dl.

Results: Based on WHO criteria, 27 patients (10.8%) had diabetes and 34 (13.6%) had pre-diabetes. The prevalence of DM in patients with schizophrenia was not significantly higher than that reported in the general population of Palestine. However, the prevalence of pre-DM was significantly higher than that reported in the general population of Palestine. Regression analysis showed that advancing age and abnormal waist circumference were significant predictors of dysglycemia in patients with schizophrenia.

Conclusions: This study confirmed the high prevalence of dysglycemia in patients with schizophrenia, supporting the need for monitoring of blood glucose in this category of patients. The presence of primary risk factors is more important in the development of dysglycemia in patients with schizophrenia than exposure to antipsychotic drugs.

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1. Introduction

Schizophrenia is a mental disorder that affects approximately 1% of populations throughout the world [1–3]. Antipsychotic drugs are the mainstay therapy for schizophrenia. People diagnosed with schizophrenia are at an increased risk of diabetes mellitus (DM) and this risk is more common among patients treated with second-generation antipsychotic (SGA) agents [4,5]. Studies in developing countries indicated that Type 2 DM has an estimated prevalence of 4.5% in the general population and 16–25% in patients with schizophrenia [6,7]. This metabolic adverse effect has significant implications in terms of both the cost of treatment and the disease burden for

patients with mental illness. The exact mechanism of antipsychotic induced glucose dysregulation is not well understood. One possible mechanism is through direct effects of antipsychotic drugs on insulin resistance. Antipsychotic drugs may have a direct effect on insulin-sensitive target tissues leading to impairment of glucose transporter function even in the absence of weight gain [8]. Another mechanism of antipsychotic-induced diabetes is due to weight gain, which can lead to insulin resistance and hyperglycemia [9]. Second generation antipsychotic drugs such as olanzapine and clozapine are associated with higher risk of weight gain [10].

Intermediate hyperglycemia or pre-diabetes represents an intermediate metabolic stage between normal glucose homeostasis and DM. Pre-diabetes can progress to DM and is also

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