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PREDIABETES IN PATIENTS TREATED WITH ANTIPSYCHOTIC DRUGS

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Background: In 2010, the American Diabetes Association (ADA) proposed that individuals with fasting glucose 100-125 mg/dl (5.6-6.9 mmol/l) or glucose 140-199 mg/dl (7.8-11.0 mmol/l) 2 hours after a 75 gm oral glucose tolerance test (OGGT) or hemoglobin A1c (A1c) 5.7-6.4% be classified as prediabetic to indicate a high risk for the development of diabetes.

Objective: To determine the prevalence of prediabetes in psychiatric patients receiving antipsychotics and to compare the clinical and metabolic features of patients with normal glucose tolerance, prediabetes and diabetes.

Method: The 2010 ADA criteria were applied to a large consecutive cohort of psychiatric patients treated at one institution in Belgium. All patients were evaluated with OGTT, A1c, insulin levels and lipid profiles.

Results: The study sample was restricted to the 783 adult patients (mean age 37.6) without known history of diabetes. 413 (52.8%) patients had normal glucose tolerance, 290 (37%) were prediabetic and 80 (10.2%) were diabetic. The 3 groups were similar with regard to psychiatric diagnoses, severity of mental illness and antipsychotic treatment. A statistically significant crescendo gradient from normal to prediabetes and from prediabetes to diabetes was observed for age, body mass index, waist circumference, fasting insulin, homeostatic model of insulin resistance (HOMA-IR) and triglyceride levels. The intergroups differences for fasting insulin and HOMA-IR were confirmed for treatment with clozapine, olanzapine, quetiapine, risperidone and amilsulpride, but not for aripiprazole or first-generation antipsychotics.

Conclusion: Prediabetes is highly prevalent in adults treated with antipsychotic drugs and correlates with markers of intraabdominal adiposity and insulin resistance.