

Screening for metabolic abnormalities in patients with schizophrenia treated with antipsychotics: are we doing enough?

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Objective: Guidelines to screen and monitor schizophrenic patients treated with antipsychotics for diabetes were recently proposed by the ADA. Preliminary evidence however suggests that the use of these guidelines may result in a large underdiagnosis of glucose abnormalities in high risk groups such as patients diagnosed with schizophrenia. Nevertheless, early detection of glucose abnormalities could well be of eminent importance in patients with schizophrenia, as prediabetic abnormalities and even frank diabetes are shown to be potentially reversible in this specific population, in contrast to classical type 2 diabetes, where a progressive deterioration of the insulin producing beta-cell occurs despite the use of initially effective antidiabetic therapies. The aim of the current study was to assess the presence of diabetes in schizophrenic patients, to investigate the adequacy of the current screening guidelines for the detection of diabetes in patients with schizophrenia, and to assess potential improvements of these guidelines.

Methods: 415 patients, who were on stable medication for at least three months, entered a prospective metabolic follow-up program, with a baseline screening consisting of a full laboratory screening and a 75 g Oral Glucose Tolerance Test (OGTT). The screening took place over a period of two years, and patients were not known with diabetes prior to the baseline screening. At baseline, the sensitivity of two screening strategies for diabetes was compared to the 'Gold Standard' for the detection of diabetes, namely performing an OGTT in all patients. The two strategies were: 1) the current screening guideline of assessing fasting glucose in all patients and 2) a screening strategy derived from the guidelines of the WHO of first assessing fasting glucose in all patients, and in those patients with fasting glucose >100 mg/dl, subsequently performing an OGTT.

Results: In the total sample, 6.3% (n = 26) met criteria for diabetes. Another 23.4% (n = 97) showed prediabetic abnormalities. A screening based on the consensus guidelines detected diabetes in 12 patients (2.9%). However, these 12 diabetes cases only represented 46.2% of the 26 cases identified by means of an OGTT. The WHO derived two-step strategy of performing an OGTT in patients presenting with IFG would have detected 96.2% of diabetes cases (25 out of 26 cases).

Conclusion: These data confirm that metabolic abnormalities

are highly prevalent in schizophrenic patients treated with antipsychotics, certainly when taking into account that all patients that were screened were not diagnosed with diabetes prior to the baseline screening, so that the diagnosed cases are newly detected or incidence cases. As the screening was performed over the period of two years, the current data suggest a mean annual incidence of diabetes of 3.15% (6.3% incident cases/2 years), or almost 14 times higher than the estimated annual incidence for the Belgian general population. The guidelines as proposed by the ADA, did not sufficiently detect diabetes in this specific high risk group. The alternative two-step strategy was able to detect the vast majority of diabetes cases and should therefore be considered in the clinical routine of screening and monitoring patients with schizophrenia.