

Diabetes and impaired fasting glucose in Sri Lankan patients with schizophrenia

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Background

Type 2 diabetes is commoner among South Asians than Europeans. The few studies of South Asian patients with schizophrenia have found increased prevalence of diabetes.

Aims

To determine prevalence of diabetes and impaired fasting glucose among patients with schizophrenia presenting to an acute psychiatry unit.

Methods

The sample consisted of all patients with ICD-10 diagnosis of schizophrenia admitted to an acute psychiatry unit during one year. Data was obtained by retrospective review of patients' records. Diabetes was diagnosed according to the American Diabetes Association criteria when fasting plasma glucose (FPG) was ≥ 7.0 mmol/l. Impaired fasting glucose (IFG) was diagnosed when FPG was ≥ 5.6 mmol/l but < 7.0 mmol/l.

Results

Of the 164 patient records reviewed 104 (63.4%) had a recorded FPG level. There was no significant difference in age, gender and treatment between patients tested and not tested. Of the sample 28 (26.9%) were antipsychotic naive and 76 (73.1) had been treated previously. Mean age of the sample was 35.1 years (SD 12.7). Diabetes was diagnosed in 15 patients. Overall prevalence was 14.4% (females 11.4%, males 16.7%). Prevalence of IFG was 26%. Diabetes rates were highest (26.9%) among 30-39 year age group and IFG rates were highest (54.5%) among 50-59 year age group.

Conclusions

Prevalence of diabetes and IFG is higher compared to the general population of Sri Lanka (10.3% and 11.5%) but similar to that of Caucasian patients with schizophrenia. Due to the high risk of dysglycaemia FPG should be done in all patients with schizophrenia.

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Introduction

Second generation antipsychotics are associated with weight gain and other metabolic side effects (1). Among the atypical antipsychotics, treatment with olanzapine has been found to worsen the lipid profile (2). Atypical antipsychotics also increase the risk of developing metabolic syndrome (3, 4). The baseline prevalence of diabetes maybe two to three folds higher in patients with schizophrenia compared to the general population (5).

Type 2 diabetes is commoner among South Asians than Europeans. This pattern is seen both in the people living in Asia as well as those who have migrated to Europe and USA. There is an increase in the prevalence of diabetes among urban and rural populations in South Asia and the prevalence is increasing over time (6). The rate of ischemic heart disease is higher among South Asian men and they have a higher age standardized mortality rate from coronary heart disease(7). South Asians, Chinese, and Aboriginal people have similar distributions of glucose and lipid factors at significantly lower body mass index (BMI) values compared with Europeans. Thus normal ranges for obesity using BMI cut off points derived from European populations may be misleading when applied to these populations (8).

Most of the available data on diabetes in schizophrenia are from studies conducted on Caucasian patients.

The few studies done on South Asian populations have found increased prevalence of diabetes and metabolic syndrome. A study of patients with first episode schizophrenia in India found the prevalence of metabolic syndrome to be 10.1% and 18.2% as assessed by ATP IIIA (9) and International Diabetes Federation (IDF) criteria respectively (10). The prevalence of metabolic syndrome after 6 weeks of treatment with antipsychotics according to ATP IIIA and IDF criteria respectively were 20 and 25% for patients treated with olanzapine, 9% and 24% for risperidone and 0% and 3% for haloperidol (11). Overall prevalence of metabolic syndrome was five times as much as in the healthy control group.

In the same sample treatment-emergent diabetes by WHO definition was present in 11.4% of subjects in the olanzapine group, 9.1% of subjects in the risperidone group and 9.7% of subjects in the haloperidol group. Using the American Diabetic Association definition the prevalence was 2.9% of subjects in the olanzapine group, 3.2% of subjects in the haloperidol group and none in the risperidone group (12).

Because the prevalence of diabetes among the general population is higher among South Asians and treatment with antipsychotics is known to increase risk of diabetes we looked at the rates of diabetes and impaired fasting glucose in patients with schizophrenia in an acute psychiatry unit in Sri Lanka.