Screening for Metabolic Syndrome in Older Patients with Severe Mental Illness

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Objective: *To evaluate metabolic screening of elderly patients with severe mental illness (SMI) in terms of newly detected metabolic abnormalities.* **Methods:** *Prospective evaluation of the metabolic screening outcome data of 100 consecutive elderly outpatients with SMI, all with universal access to health services. We gathered data on previous diagnoses of hypertension, diabetes, and dyslipidemia and assessed metabolic syndrome parameters. The findings were compared with those from a group of 124 healthy elderly.* **Results:** *In our patients with SMI (mean age: 69 years; 52% bipolar disorder, 48% schizophrenia), the frequency of metabolic syndrome was not higher compared with the healthy elderly. However, in 51% of the SMI sample, metabolic screening detected at least one metabolic abnormality in a patient with no prior history for that specific parameter.* **Conclusion:** *Implementing routine screening for metabolic syndrome in elderly patients with SMI may reveal substantial rates of previously undetected metabolic abnormalities.* (Am J Geriatr Psychiatry 2014; ■:■−■)

INTRODUCTION

Patients with severe mental illness (SMI) have lower quality of physical health and a reduced life expectancy compared with the general population.[1–3] The most common cause of death in patients with SMI is cardiovascular disease.[2] Increasing attention has been focused in recent years on the high prevalence of cardiovascular disease, diabetes, and metabolic syndrome in patients with SMI[2,4–6] that can be attributed to a combination of genetic, lifestyle, disease-specific, and treatment factors.[2] Important lifestyle factors are smoking, diet, and limited physical activity. Antipsychotic medication, especially second generation, may induce weight gain and metabolic abnormalities.[6] However, metabolic abnormalities have also been detected in medication-naive schizophrenia patients presenting with their first episode of illness,[4] adding evidence for a multifactorial etiology. Other potentially contributing factors are chronic elevation of stress levels, limited access to general healthcare, and lack of adequate coordination of care.[2] Guidelines have been developed to implement screening, monitoring, and prevention of cardiometabolic risk factors in patients with SMI. Management of metabolic disturbances in SMI has proven to be feasible and effective.[2] However, guidelines are only partially followed in clinical practice, and rates of treatment for hypertension, dyslipidemia, and diabetes in schizophrenia are low.[7]

Elderly patients with SMI are rapidly increasing in number, and most are treated in community care

settings. Older patients are a specifically vulnerable group, not in the least because of their physical comorbidities. In older people, metabolic syndrome leads to a significantly higher risk for cardiovascular events[8]; this is also seen in elderly with psychosis.[9] In a number of studies on screening for metabolic syndrome in patients with SMI, elderly patients were included in the total sample; however, we are not aware of studies that exclusively targeted elderly patients.

This study evaluates the added value of preventive metabolic screening in elderly outpatients with SMI (age ≥ 60 years). Our hypothesis was that metabolic screening would newly detect metabolic abnormalities in a substantial minority of these patients. We compared total frequencies of metabolic abnormalities in a group of elderly patients with SMI with those in a group of healthy elderly.

METHODS

Sample and Design

In a psychiatric outpatient clinic for the elderly of the mental health institution GGZ inGeest (Amsterdam, the Netherlands), metabolic screening of elderly patients diagnosed with SMI has been implemented since 2011 as part of standard care. On an annual basis, we gather information on previous diagnoses of hypertension, diabetes, and/or dyslipidemia and usage of related medication. Blood pressure, waist circumference, and laboratory values of fasting glucose, triglycerides, and high-density-lipoprotein cholesterol levels are assessed. We prospectively evaluated the results of this screening in the first 100 consecutive patients with SMI who completed the screening between January 2011 and January 2013. All data were gathered from patients' medical files. The study was approved by the Medical Ethics Committee of the VU University Medical Center, Amsterdam.

We compared the frequency rates for metabolic syndrome and its parameters in the SMI group with a comparison group of healthy elderly. The comparison group was recruited from 14 general practices in the vicinity of Amsterdam, Groningen, and Leiden for the Netherlands Study of Depression in Older Persons,[10] a prospective cohort study designed to study the course of depression. The nondepressed comparison group had no lifetime diagnosis of depression, dementia, or other serious psychiatric disorders and had sufficient command of the Dutch language.

Measures

Metabolic syndrome was defined according to the National Cholesterol Education Program Adult Treatment Panel III (ATP III) criteria:[11] blood pressure >130 mm Hg systolic or >85 mm Hg diastolic; waist circumference >102 cm for men and >88 cm for women; fasting glucose >6.1 mmol/L; high-density-lipoprotein cholesterol <1.0 mmol/L for men and <1.3 mmol/L for women; and fasting triglycerides >1.7 mmol/L. Three or more abnormalities are required for a diagnosis of metabolic syndrome. We assessed these parameters in the SMI group and in addition gathered information on previous diagnoses and use of medication (antihypertensives, oral antidiabetics/insulin, and statins). This enabled us to evaluate which abnormalities were newly detected and which were in line with a previous diagnosis of hypertension, diabetes, and/or dyslipidemia. Because prior data on waist circumference were lacking, we did not include detection of a high waist circumference under "newly detected abnormalities." Additional information on gender, age, diagnosis, ethnicity, tobacco use, and current medication was collected from the medical files.

We retrieved data on characteristics, medical history, and metabolic parameters for the elderly healthy comparison group from the Netherlands Study of Depression in Older Persons database. These results had previously been gathered (from 2007 to 2010) by medical questionnaires, physical examination, and laboratory analysis of a blood sample. Because of slight differences in design, we did not compare data on "newly detected" metabolic abnormalities in the comparison group with those from patients with SMI.

Statistical Analysis

Descriptive statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS for Windows; IBM, Armonk, NY), version 21. In the SMI group, bivariate analyses were conducted using χ^2 tests to examine the association of metabolic syndrome with psychiatric diagnosis, smoking status, and usage of antipsychotics. Differences across the two groups