
PSYCHIATRIC MEDICATION – WEIGHT GAIN AND THE METABOLIC SYNDROME

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About 60% of the excess mortality observed in patients with severe mental illness (SMI), such as schizophrenia, bipolar disorder and major depressive disorder (MDD), is due to physical comorbidities, predominantly cardiovascular diseases. Weight gain and the metabolic syndrome are undesired effects of psychiatric medication, which ultimately can limit the use of a drug. Frequently, the decision whether to continue or switch a drug is not easy to make, and carefully weighing off the benefits and potential problems should be part of an informed treatment strategy.

Keywords: obesity, metabolic syndrome, medication, psychiatry

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Introduction

People with severe mental illness, including schizophrenia and related psychotic disorders, bipolar disorder and major depressive disorder (MDD), experience a two-three times higher mortality rate than the general population [1, 2]. The mortality gap translates into a 10-20 year shortened life expectancy [3, 4] and appears to be widening [5].

About 60% of the excess mortality observed in patients with severe mental illness (SMI) is due to physical comorbidities, predominantly cardiovascular diseases [6]. Factors predisposing people with SMI to these conditions include

- antipsychotic medication and unhealthy lifestyles [7] and
- the lower probability to receive standard levels of medical care [8-12].

Metabolic Syndrome

Meta-analyses 13-16[21-24] documented that people with severe mental illness have an increased risk for developing metabolic syndrome compared with the general population.

Patients with schizophrenia and bipolar disorder seem to be at similar risk of developing it. 17[25] The prevalence appears higher in individuals with multi-episode schizophrenia compared with persons in their first episode. 14,18[22, 35] The relative metabolic syndrome risk compared to the general population is greatest in younger people with SMI and those treated with antipsychotics 19,20[37, 38].

Metabolic syndrome is defined by a combination of

- central obesity
- high blood pressure
- low high-density lipoprotein (HDL) cholesterol
- elevated triglycerides and
- hyperglycemia.

In the general population, these clustered risk factors have been associated with the development of cardiovascular disease and excess mortality 21-23[13-15].

Populations

Gender

Population studies showed no significant difference between men and women. 24,25[33, 34]

Age

Increasing age appears a key predictor of metabolic syndrome in the general population and in people with severe mental illness. 15,26[23, 36]

Antipsychotics

Antipsychotic medications is increasingly used as frontline treatments for bipolar disorder 27[50], major depressive disorder 28[51], anxiety and some personality disorders (particularly borderline personality disorder), next to its conventional use in treating psychosis. Studies suggest that all antipsychotic medications places patients at a higher risk for the metabolic syndrome than the general population. It appears that 11,29-32[11, 32, 39-41]

- the risk of metabolic syndrome is significantly higher with clozapine, followed by olanzapine.
- the risk of metabolic syndrome is significantly lower with aripiprazole than for other antipsychotics, including typical antipsychotics
- the risk of metabolic syndrome is not appreciably higher with amisulpride than it is for aripiprazole.

The lowest metabolic syndrome prevalence for aripiprazole is noteworthy, as antipsychotics with lower cardiometabolic risk profiles in short-term studies are often prescribed for higher risk patients in clinical care, which may lead to an even higher cardiometabolic risk for the other drugs 33[42].

Antidepressants

A number of antidepressants from the group of serotonin reuptake inhibitors, the tricyclic antidepressants and mirtazapine, which has noradrenergic and serotonergic effects, and others have been linked to weight gain and the metabolic syndrome.

Studies found that some antidepressants may, in some circumstances, reduce hyperglycemia, normalize glucose homeostasis and also increase insulin sensitivity, 34[52] whereas others, including tricyclic antidepressants, may exacerbate glycaemic dysfunction or have little effect on glucose homeostasis 35,36[53, 54].

Patients with atypical depression appear to have significantly higher levels of inflammatory markers, body mass index, waist circumference and triglycerides, and lower HDL cholesterol than those with melancholic depression 37[55].

Minimizing Risk

People with severe mental illness are more likely than the general population to have unhealthy lifestyle behaviors which can increase the risk of metabolic syndrome and cardiovascular disease. They tend to be more likely to be sedentary 38[43], smoking 39[44] and having diets that are high in saturated fats and refined sugars, while low in fruit and vegetables 40[45]. Thus, screening for and trying to minimize risk factors should be a key priority in the multidisciplinary treatment of people with severe mental illness 41-44[46-49].



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