Managing cardiovascular risk factors in people with serious mental illness: the tragedy of neglect

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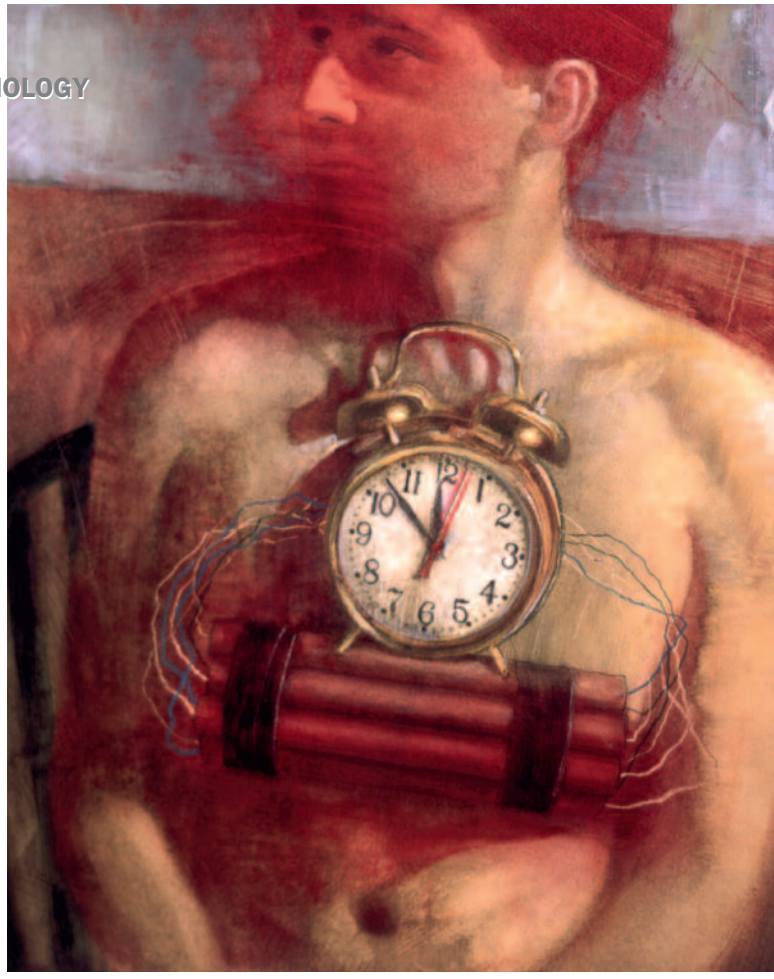
People with serious mental illness are increasingly being recognised as being in a high-risk group with respect to premature morbidity and mortality due to cardiovascular disease and diabetes. A proactive approach to assessment and targeted screening of these patients for cardiovascular risk factors should be taken.



Key points

- **People with schizophrenia and other psychotic disorders (serious mental illness) have a very high risk of developing early an untimely cardiovascular disease.**
- **Physical health issues are traditionally neglected in this group of patients.**
- **Use of antipsychotics is usually 'blamed' for the increase in cardiovascular disease and diabetes but is unlikely to be the main contributor.**
- **Traditional cardiovascular risk factors, such as diabetes and obesity (due to poor diet and physical inactivity), dyslipidaemia and smoking, need to be addressed proactively and considered early within the management plan.**
- **There are special considerations in the management of people with schizophrenia, such as poor adherence to medications and polypharmacy, which need to be addressed.**

ENDOCRINOLOGY TODAY 2013; 2(1): 25-27

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Schizophrenia and other psychotic disorders affect about one in 100 people. The incidence peaks in late adolescence and early adulthood in both sexes, with a second rise around the time of the menopause in women.

In the general population there have been improvements to life expectancy through management of traditional cardiovascular risk factors, as well as significant advances in intervention, such as angioplasty and cardiac surgery. Across the broader community smoking has decreased and the awareness of better diet and the need for exercise has progressively risen over the past few decades. It is tragic, however, that these improvements cannot be found in patients with schizophrenia, in whom life expectancy has consistently been shown to be reduced by up to 25 years compared with that in the general population.[1]

Causes of increased risk of cardiovascular disease and diabetes

There are complex reasons why people with schizophrenia may be at an increased risk of cardiovascular disease and diabetes. In the past century, before the introduction of antipsychotic therapy, people with mental illness were found to have a higher prevalence of diabetes than the general population. The advent of initially typical and subsequently atypical or second-generation antipsychotic medications has been accompanied by an increase in the rates of diabetes and obesity in people with schizophrenia, so that frequently these increases have been attributed solely to the use of these drugs. This is erroneous because although some of these medications are likely to play a significant role,

Routine baseline screening in people with schizophrenia

Personal history: smoking, blood pressure, dyslipidaemia, ethnicity, polycystic ovarian syndrome, gestational diabetes, diet and exercise history and sedentary activity

Family history: cardiovascular disease, obesity and diabetes

Physical examination: weight, height, body mass index, waist circumference, blood pressure and capillary blood glucose (using blood glucose monitor)

Laboratory investigations: fasting blood glucose level, lipid levels (total cholesterol, LDL-cholesterol, HDL-cholesterol, triglyceride levels as a minimum) and other baseline biochemistry. HbA_{1c} level should be measured every three months if the patient has diabetes, and a complication assessment annually or more frequently if indicated

traditional modifiable risk factors, such as unhealthy eating, physical inactivity, dyslipidaemia, family history and smoking, have a far greater significant contribution.[2,3]

Approximately 70 to 80% of patients with schizophrenia regularly smoke, up to 60% have the 'metabolic syndrome' according to the International Diabetes Federation criteria, 50% have family histories of diabetes and, in urban areas, about 40% come from 'high-risk' ethnic backgrounds (with respect to diabetes vulnerability).

It is likely that the high prevalence rates of poorly managed risk factors stem more from barriers to adequate care than from any particular biomedical driver associated with psychosis.[4]

Management in general practice

Management of patients with severe mental illness includes routine assessment (such as history and examination), routine investigations and treatment (see the box on this page). Australian guidelines suggest that monitoring of these patients be undertaken every six months.[5] Unfortunately, significant proportions of patients with severe mental illness do not see or have access to a GP.[6] It is hoped that patients in the minority who have a GP will have access to an adequate level of physical health care.

There is no reason to believe that patients with psychosis will not respond to traditional interventions or medications such as statins or antihypertensives as long as they take them. However, there is no point in prescribing them if the patient does not fill the prescription or take the medication. The same applies to medications for diabetes, such as oral hypoglycaemic agents and injectables (insulin and glucagon-like peptide analogues).

The psychosocial aspects of treatment (exercise, diet and socialisation) require dedicated and individualised plans, as do appropriate referral pathways to, for example, an endocrinologist. Referral of the patient to dietetic, exercise physiology and smoking cessation services will often be necessary and valuable.

Special considerations

Adherence to medications

Despite the advances in pharmacotherapy, there are obstacles to the management of people with schizophrenia. One of the main reasons for this relates to the parlous rates of non- and partial adherence to antipsychotic medications. In people with schizophrenia, the use of intramuscular long-acting antipsychotic injections is a well-described strategy to combat this (only about one-quarter to one-third of patients with schizophrenia are thought to be regularly and adequately adherent to oral medications). In the long-term management of metabolic and cardiovascular illnesses, poor adherence is also a major problem.[7,8] For the mentally ill patient with a comorbid metabolic illness, the double whammy of illness burden also carries an increased difficulty with maintaining adherence to all aspects of treatment.

Developing strategies with the patient for better, regular medication taking may be the most crucial aspect of care. These strategies include regular review of the patient by the GP and assertive community outreach team, reinforcement of the need for adherence to medications, as well as encouragement of appropriate physical activity and food choices.

Advocacy issues

Patients with schizophrenia are poor advocates for their own health. Presentation may result in the mental condition being addressed but not the physical condition because the patient does not volunteer sufficient information to signal a comorbidity problem. If a patient has a case manager, working in partnership with a GP may facilitate both attendance and the breadth of services actually required by this patient group.

Issues of neglect

Many of the barriers to adequate screening, detection, treatment and monitoring of cardiovascular risks in people with severe mental illness occur due to neglect occasioned by the illness, the medical system and its practitioners, and the patients themselves.[4] Given the very high rates of comorbidity in this population, it would be safe to make the a priori assumption that a proactive approach to assessment and targeted screening for these cardiometabolic risk factors should be taken.

Patients with severe mental illness are often considered unlikely to be able to engage in the prime management strategies for cardiometabolic risks – that is, lifestyle modification. This, however, is not born out by patient-revealed preference. If these patients are assisted in attending exercise and dietary interventions, they often demonstrate good ongoing persistence and/or attendance. It is the initiation of the activity that most often curtails their involvement, not their desire to commit to lifestyle change.

Role of medications

Although there exists a hierarchy of orexigenic effects associated with the use of antipsychotics, it is always important to establish the best antipsychotic for the patient's illness. If the antipsychotic is one that

is not metabolically benign, then early and very active interventions to contain these risks (e.g. dyslipidaemia) should be considered. On the other hand, if an antipsychotic is used with no particular need for that agent in particular, then switching to a more metabolically neutral agent should be considered (e.g. aripiprazole, ziprasidone).[3] In a similar vein, the use of polypharmacy should be reviewed carefully because many other psychotropics that are used in combination with antipsychotics may facilitate weight gain (e.g. valproate, lithium, mirtazepine, tricyclic antidepressants) and their use may be off label or without a supportive evidence base.

Role of metformin

For patients at risk of cardiovascular disease but who do not have diabetes, there is continuing debate over whether agents such as metformin should be considered in the treatment regimen.[9] The large diabetes prevention study found that metformin is effective and safe but is not a substitute for appropriate lifestyle intervention in the 'prediabetic' group of patients.[10] In some countries, local custom is to coprescribe metformin routinely when commencing antipsychotic agents that have a high 'diabesity' potential, such as clozapine. Metformin, however, is not currently funded by the PBS in Australia for 'prediabetes'.

Role of the GP

Many patients with schizophrenia will not have a regular GP. For those who do, the GP will have a central role and be more familiar than mental health teams in coordinating and managing the physical health of these patients. This vital role includes the routine assessment and treatment of cardiometabolic risk factors, referral of the patient to a smoking cessation service, liaison with mental health services, and referral of the patient to diabetes and other allied health services if required.

Conclusion

People with serious mental illness are increasingly being recognised as being in a high-risk group with respect to premature morbidity and mortality. That they are likely to be so due to neglect rather than due to some unique biological vulnerability suggests that an assiduous approach to global health may improve longer-term outcomes. **ET**

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COMPETING INTERESTS: None.