Patient subpopulations with elevated cardiovascular risk pose unique treatment challenges

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Advancements in the field of preventative cardiology provide clinicians with a number of tools, and guidance, for the effective treatment of the general patient population. However, treatment paradigms proven to be effective for the typical patient can fall short when applied to those with relevant comorbid conditions. A complex challenge to those who must treat such patients is first to identify whether these populations are at elevated cardiovascular risk, second, to determine whether the disease therapy itself may exacerbate that risk and, third, to effectively lower the risk without compromising the clinical efficacy afforded by the therapy.

I have chosen from two seemingly disparate disease areas to illustrate the unique challenges of primary and secondary cardiovascular prevention in these populations: those with HIV disease and those with psychiatric illness. There are others but these two provide a clear perspective on the challenges clinicians must face.

For both disease categories, the introduction of new therapies in the 1990s has provided a substantial improvement in the clinical prognosis of patients so afflicted. For those with HIV disease, antiretroviral therapies have prolonged survival from months to years. Among the mentally ill, the introduction of the newer, so called atypical antipsychotics have provided effective treatment of psychotic symptoms and mood disorders with a dramatic reduction in the incidence of serious psychomotor side effects, such as tardive dyskinesia.

However, as a consequence of prolonged survival among HIV patients and effective symptom control in the mentally ill, issues regarding cardiovascular risk in these patient populations have become more apparent. Reports of elevated risk, first as case series and later as epidemiological and clinical analyses, suggest that these patients differ from those in the general population, owing in part to a higher prevalence of cardiovascular risk factors, an independent effect of their disease or an adverse consequence of the respective therapies for the conditions. The distinction is important because higher risk factor levels might be accounted for by the conventional treatment (e.g., ATP-III) algorithms, whereas disease or disease therapy effects may require added data to inform treatment decisions.

Let’s review the evidence by disease state. A recent study by Enger and colleagues provides a compelling perspective on cardiovascular risk in psychiatric versus general populations [1]. A matched cohort of schizophrenia and general patients was compared on the person time incidence of both cardiovascular disease (e.g., myocardial infarction and cardiovascular mortality) and diabetes. The risk of cardiovascular events was doubled...
and diabetes event rates were threefold higher in the schizophrenia population. These findings have been corroborated by Goff and colleagues who reported a doubling of the Framingham risk score for coronary heart disease among patients enrolled in a National Institute of Mental Health-sponsored clinical trial compared with a general population (i.e., National Health And Nutrition Examination Survey) reference group [2].

The two studies provide compelling evidence as to the elevated risk status of this patient group. In addition, two recent systematic reviews have described elevations of both dyslipidemia and ATP-III defined metabolic syndrome among patients with schizophrenia [3,4]. A recent US CDC report comparing overall mortality among mentally ill patients with that of the general population concluded that survival is reduced by 25 years in the former, but in consultation with disease area specialists and with a thorough knowledge of existing guidelines, treatment strategies applied to the typical patient may not be adequate for this special group of patients. These decisions must not be rendered in isolation but in consultation with disease area specialists and with a thorough knowledge of existing guidelines.

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