



Editorial

Importance of metabolic syndrome for South Asians

The prevalence of obesity and metabolic syndrome is rapidly increasing in developing (low income) countries and, as expected, so is the morbidity and mortality associated with diabetes and cardiovascular disease (Misra and Khurana, 2008). Metabolic syndrome is a strong and reliable predictor of increased risk for both diabetes and cardiovascular disease (Grundy et al., 2004). In persons with a mental illness, it has been recognized for several years that individuals with schizophrenia have an increased risk of developing metabolic syndrome, diabetes and premature mortality (Saha et al., 2007). As the paper by Chengappa and colleagues in this issue, highlights, the increased risk is not limited to persons with schizophrenia (Editor, please put in reference). Among persons with mental illness, the effects of traditional risk factors for diabetes and heart disease, like family history, are similar to the effects of these risk factors in the general population. However, for the patients, there is increasingly solid evidence that psychotropic medications play a role in increasing the risk of diabetes, and increasing the prevalence of metabolic syndrome (Newcomer and Haupt, 2006).

Of particular interest to the readers of this Journal, and as mentioned by Chengappa and colleagues, individuals of South Asian descent are more vulnerable than other ethnic groups to the development of metabolic syndrome (Misra and Khurana, 2008). When exposed to changes in nutrition, activity, or lifestyle either through immigration, or through urbanization in the home country, South Asians show rapid rises in the incidence of metabolic syndrome, diabetes, and heart disease (Reddy, 2002). In studying immigrant populations in the United Kingdom, for example, several studies have shown that South Asian immigrants have higher rates of mortality from cardiovascular disease, as compared to those of Caucasian or African descent (Cappuccio et al., 2003; Khattar et al., 2000). In Singapore, for instance, ethnic Indians had higher prevalence of metabolic syndrome by both NCEP and IDF criteria, than ethnic Malays and ethnic Chinese individuals (Tan et al., 2004). Studies in different parts of India also show that the prevalence of metabolic syndrome and diagnosed diabetes is generally higher than found in developed (high income) countries. The highest rates of diabetes in India tend to occur in urban areas, with the poor, such as slum dwellers most adversely affected (Misra et al., 2000).

When it comes to psychotropic medications, novel (atypical) antipsychotic medications, such as clozapine and olanzapine, appear to be associated with significantly increased risk of obesity and dyslipidemia (Newcomer and Haupt, 2006). The ready availability of these new compounds, at comparatively low prices in India, may unfortunately expose a highly susceptible population

to the risk of significant morbidity, and the country to escalating health care costs. Admittedly there are few data from South Asia on the contribution of novel antipsychotics to risk of obesity, metabolic syndrome, and diabetes, in the countries of the region. However, anecdotally, colleagues in India have shared with me “horror stories” of patients who have had alarming amounts of weight gain or the rapid development of diabetes in patients prescribed novel antipsychotics. So it seems likely that these medications have the same increased risk of metabolic adverse effects for South Asians as for Caucasians.

The high risk of diabetes and heart disease in South Asians has resulted in recommendations that the threshold for diagnosing obesity and metabolic syndrome need to be modified for these populations. The IDF has proposed revised Body Mass Index (BMI) and waist circumference (WC) cut off for Asians (Alberti et al., 2005). Recently a consensus conference in New Delhi, November 2008, proposed new cutoffs and action thresholds for obesity, waist circumference, and metabolic syndrome for use in India (Misra et al., 2009). Under these recommendations, for instance, at a waist circumference of a mere 78 cm in men and 72 cm in women, an action level is triggered to take steps to avoid further weight gain.

One piece of good news is that early efforts to prevent the development of diabetes, through intensive lifestyle interventions, seem to be equally effective in Urban Indians as compared to these programs in Western countries (Ramachandran et al., 2006). Furthermore, cost-effectiveness analyses of the Indian Diabetes Prevention Program showed that both behavioral treatments and medications were quite cost effective (Ramachandran et al., 2007).

In conclusion, issues of obesity, metabolic syndrome, and the consequences of type 2 diabetes and heart disease should be of great significance to South Asians. The countries of South Asia also need to focus on dealing with the predicted epidemic of diabetes and cardiovascular morbidity and mortality which is expected over the next 25–30 years. Environmental, community health, and prevention measures, especially with young people, would be a wise investment for the government of the region. Clinicians in the region, and those treating South Asian patients in other parts of the world, also need to take into consideration the increased susceptibility of this ethnic group to metabolic syndrome and diabetes when choosing medications and monitoring patients who are on medications.

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