

EDITORIAL

OBESITY: WHAT LIES BENEATH?

Obesity is a chronic disease that is associated with an excess mortality in a relationship that is best described as a "J"-shaped curve(1). As body mass index (BMI) increases, there is a curvilinear increase in mortality mostly attributable to increased deaths from heart disease(1,2), diabetes, hypertension and some forms of cancer in both men and women(1). The cardiovascular mortality is mediated through decreased levels of high-density lipoprotein (HDL) cholesterol, elevated triglycerides (TG) and hypertension(1). Increased levels of highly atherogenic, small dense low density lipoprotein (LDL) particles(2), elevation of plasminogen activator inhibitor-1, a proinflammatory state and insulin resistance(3) may co-exist as part of the "metabolic syndrome". Weight loss studies show that all of these derangements revert towards normal with successful weight reduction(1).

Marina Njelekela *et al*(4) in this issue of the journal reports on a cross sectional study of 545 Tanzanian subjects aged 46-58 years. They evaluated the relationship between obesity and its distribution on serum lipids in urban, rural and pastoral areas in Dar es Salaam. Women were found to have a higher BMI and waist circumference (WC) than men and the prevalence of obesity was higher in the urban than rural areas. The mean levels of total and LDL cholesterols and triglycerides but not HDL correlated positively with quintiles of BMI and waist circumference. In the whole study population they found obesity (BMI > 30kg/M²) in 22.5% of women and 5.1% of men with a high prevalence even in rural areas. The report attests to the prevalence of obesity in our environment and that it is associated with the expected lipid derangements (except for HDL cholesterol in this study) that would constitute part of the predisposition to cardiovascular disease.

Whilst we grapple with the HIV/AIDS scourge we should not be driven to complacency with regards to the worldwide increase in the prevalence of obesity which has been classified as an epidemic by The World Health Organisation(5) and the National Heart Lung and Blood Institute of the National Institutes of health(6). We should endeavour to move the diagnoses and management of obesity to the forefront allowing healthcare providers to prevent its development or to treat it before complications develop(5,6). Unfortunately many of us only wait to treat the co-morbidities as they develop. This attitude may arise from the fact that the treatments for co-morbidities like diabetes, hypertension, dyslipidaemia and heart disease are more established and familiar compared to those available for obesity. Additionally the lack of adequate dietary knowledge, a limited number and effectiveness of available compounds(7) and withdrawal of some due to side effects(8) have been some of the factors hindering the treatment of the root cause of the co-morbidities.

This study serves to reinforce the fact that diagnosing obesity and identifying an individual at risk requires only a measuring tape and a weighing scale. The derived BMI and WC allow the identification of "action points" for intervention(9). The addition of lipid measurements, blood

pressure readings and a fasting blood sugar would enable the clinical diagnoses of the metabolic syndrome, which should be a target for intensive therapeutic lifestyle changes (exercise, dietary and behavioural)(9). The constituents of this predominantly obesity-related syndrome may predate overt type II diabetes mellitus (DM) by more than a decade and contribute to the fact that more than 50% of patients have established atherosclerotic disease at the time DM is diagnosed(10,11).

That treatment of obesity has significant medical benefits was demonstrated in a long-term prospective study(12). The incidence rate of new cases of DM was reduced to none over two years in patients who maintained a 12% or more weight loss compared to an incidence of 8.5% in patients who did not lose weight. There was also a significant reduction in the two-year incidence of hypertension and lipid disturbances among patients who had lost weight compared to those who did not. Thus, a very modest sustained reduction in weight can have a major positive impact on co-morbidities as well as reducing their risk of developing. This would translate into a saving on healthcare costs to treat these co-morbidities. More local data are obviously needed on this universal disease and we should attempt to keep abreast with available management strategies(13).

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