

Risk Factors for Cardiovascular Disease in Patients With Type 2 Diabetes at Kenyatta National Hospital, Kenya

Samuel Kimani, BScN, MSc, Stephen Kainga, BScN, Margaret Chege, MPH, PhD, Miriam Wagoro, BScN, MScN, University of Nairobi, Nairobi, Kenya.

Background: Cardiovascular diseases are a major cause of mortality and morbidity worldwide. In a sub-Saharan Africa cardiovascular and other metabolic diseases including diabetes are increasingly causing significant socio-economic and health burden. The increase has severely affected our health care systems already struggling with the burden of tropical and communicable diseases. Patients with diabetes are 2-4 times likely to develop cardiovascular disease and/or stroke. Although the risk factors for cardiovascular disease among type 2 diabetes may be known, there is inadequate information concerning diabetic patients attending Kenyatta National Hospital (KNH). *Objective:* To determine risk for cardiovascular disease among patients with type 2 diabetes at KNH.

Methods: This was a cross-sectional study involving 147 participants diagnosed with type 2 diabetes. Participants were recruited consecutively after provision of written consent. The socio-demographics and relevant clinical data were obtained. Cardiovascular assessment, heart rate, blood pressures, lipid profile, and anthropometric parameters were obtained using standard clinical methods.

Results: Majority (63.3%) of the participants were hypertensive and suffered diabetes for more than 10 years. Additionally, they had higher ($p < 0.05$) total cholesterol; however, only 26.5% were on anti-lipidemia therapy. The use of angiotensin converting enzyme inhibitors was associated with reduced ($P < 0.05$) risk of hypertension. Further, a significant number (69.2%) of participants added salt to food regularly and exhibited significantly ($p < 0.05$) higher anthropometric parameters and psychological stress.

Conclusion: Our study underscores the role of diabetes, hyperlipidemia, psychological stress, higher anthropometric parameters and high dietary salt intake as risk factors for cardiovascular disease among diabetes. The risk factors among diabetes mirror the general population and the adoption of multi-factorial approach can mitigate their effects. The approach should include early detection, routine biochemical monitoring and aggressive treatment, nutritional adherence, lifestyle modification and follow-up care.