

Cardiovascular Topics

A prevalence of cardiometabolic risk factors among a rural Yoruba south-western Nigerian population: a population-based survey

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Summary

Background: It has been hypothesised that rural sub-Saharan Africa is at an early stage of epidemiological transition from communicable to non-communicable diseases (NCD). Limited information exists about the prevalence of cardiometabolic risk factors and the burden of cardiovascular disease (CVD) in the adult Nigerian population, especially in the rural setting.

Objectives: The aim of this study was to assess and describe the prevalence of several cardiometabolic risk factors in the sub-Saharan adult population of a rural Yoruba community, living in south-western Nigeria.

Methods: The study was a descriptive, cross-sectional, random-sample survey. Participants were visited at home by trained nurses and community health extension workers (CHEW) who administered a questionnaire, took the relevant history, carried out clinical examinations and measurements and took samples for laboratory tests. They were supervised by primary healthcare physicians serving the community. The variables recorded comprised clinical history, CVD risk factors including blood pressure (BP), body mass index (BMI), waist circumference, blood sugar and serum lipid levels, cigarette use, and dietary habits. The participants included 2 000 healthy adults aged 18 to 64 years who had been living in the area for more than three years.

Results: The average age was 42.1 ± 21.6 , with 43.7% (873) being males and 56.3% (1127) females; 20.8% were hyper-

tensive with BP $\geq 140/90$ mmHg, 42.3% of the men and 36.8% of the women had BP $\geq 130/85$ mmHg; 2.5% had diabetes, 1.9% had hypertriglyceridaemia, 43.1% had low HDL-C, 3.9% had general obesity, 14.7% had abdominal obesity, 3.2% were physically inactive, and 1.7% smoked cigarettes. Overall, 12.9% of the subjects were found to have at least one CVD risk factor. Using the Adult Treatment Panel (ATP) III criteria, 2.1% of men and 2.7% of women in the study population had at least three of the criteria, the commonest being HDL-C < 40 mg/dl in men or < 50 mg/dl in women, followed by BP $\geq 130/85$ mmHg, then waist circumference > 88 cm in women or > 102 cm in men, followed by blood glucose ≥ 110 mg/dl.

Conclusion: The results obtained from this study strongly suggest a high prevalence of cardiometabolic risk factors in this rural population and that the epidemiological transition is not restricted to the urban population. This serves as a wake-up call for action in the planning of health services for the management of CVD and other chronic NCDs.

Keywords: cardiometabolic risk factors, cardiovascular disease, Nigeria

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Worldwide, cardiovascular diseases (CVD) and the metabolic syndrome are major causes of morbidity and mortality, including sudden death.^{1–3} CVD is emerging as a significant health problem in sub-Saharan countries such as Nigeria, with a population of 140 million. These countries are undergoing epidemiological transition from communicable to non-communicable diseases (NCDs).^{4,5} Epidemiological transition has been closely linked to changes in the demographic, social and economic status of various populations, causing a global rise in chronic diseases, especially cardiovascular diseases (CVD).^{4,5}

The prevalence of CVD, specifically stroke and heart attack is on an upward trend in the sub-Saharan region, accounting for one-tenth of all deaths.⁶ Nigeria has a double burden of communicable and non-communicable diseases. Maternal and childhood mortality, tuberculosis, malaria fever and HIV/AIDS are still the leading causes of death. However, increased urbanisation with rapid rural–urban migration, demographic, environmental, social, cultural and behavioural changes might have led to unhealthy lifestyles, with increased motorisation, decreased physical activity, poor dietary habits, and tobacco use and alco-

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