THE CHANGING PATTERNS OF HYPERTENSION IN GHANA: A STUDY OF FOUR RURAL COMMUNITIES IN THE GA DISTRICT

Objective: To determine the prevalence, distribution and risk factors of hypertension among rural residents in Ghana.

Design and Setting: Cross sectional study in four rural communities in the Ga District of Ghana.

Subjects and Methods: All adults aged ≥18 years in four rural communities were asked to participate. The average of two blood pressure readings taken with a mercury sphygmomanometer after 10 minutes of rest was used in the analysis. Hypertension was defined as blood pressure ≥140/90 mm Hg.

Results: 362 subjects with a mean age of 42.4 ± 18.6 years participated in the study. The prevalence of hypertension was 25.4%. Of those with hypertension, only 32.3% (n=30) had prior knowledge of their condition, and less than half of these (n=12) were on treatment. Of those on treatment 16.7% were well controlled (blood pressure ≤140/90 mm Hg). The adjusted odds ratios for developing hypertension for overweight or obesity were 5.8 (95% confidence interval 1.4–24.3) and 6.9 (95% confidence interval 1.7–28.2), respectively. The adjusted odds ratio for hypertension for age groups 45–54, 55–64, and 65+ years were 31.9 (95% confidence interval 1.88–539.11), 31.8 (95% confidence interval 1.6–624.2), and 58.8 (95% confidence interval 2.9–1168.7), respectively. The adjusted odds ratio for hypertension with respect to smoking, alcohol consumption, job-related physical activity, family history, education, occupation, and diabetes status did not attain statistical significance.

Conclusion: Hypertension is now of public health significance in rural Ga District of Ghana. The high rate of hypertension was associated with low levels of awareness, drug treatment, and blood pressure control. Overweight and obesity are modifiable risk factors for hypertension that can be addressed through lifestyle interventions. Additionally, integrating hypertension care into primary care in rural health facilities may prove beneficial.

Key Words: Africa, Cardiovascular Risk Factors, Community, Hypertension, Prevalence, Rural

INTRODUCTION

Hypertension is an important cause of morbidity and mortality worldwide. Its definition is arbitrary and has been defined as the level of blood pressure (BP) at which detection and treatment do more good than harm.1 The current definition of hypertension is a systolic BP ≥140 mm Hg or diastolic BP ≥90 mm Hg or both.2

Hypertension, which was considered to be nonexistent or extremely rare in most African societies, particularly in rural communities, is now emerging as a public health problem in sub-Saharan Africa.3–5 The rise in prevalence may be a result of rapid changes in diet and physical activity related to urbanization and modernization, which has affected both urban and rural dwellers.6,7 The prevalence of hypertension in various African communities has varied widely but has generally been higher in urban than in rural communities, with a few exceptions.5–13 Hypertension has been associated with various factors, including age, sex, family history, alcohol consumption, smoking, obesity, level of education, and occupation, among others.14–16 In Ghana, few population-based studies on hypertension have been carried out. A blood pressure survey of 20 rural Ghanaian villages in 1973 found a prevalence of 2%–5% and concluded that hypertension was not a significant health problem in rural Ghanaians.4 In a recent study of two urban communities and one rural community in Ghana, however, hypertension prevalence was 28.4%.19 The annual health report of the Ga District continues to show hypertension ranking among the top 10 diseases over the past five years, indicating that contrary to what is believed, hypertension does not only occur in urban areas.20 Hypertension may thus not be rare in rural Ghana as previously noted. This study was carried out to determine the prevalence of hypertension among adults in a rural district of Ghana, to establish the pattern of hypertension distribution, and to evaluate the risk factors associated with high BP.

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From the National Diabetes Management and Research Centre, Korle Bu Teaching Hospital, Korle Bu (JA, AA), and the Department of Medicine, University of Ghana Medical School (AA), AccraNoguchi Memorial Institute for Medical Research, University of Ghana, Legon (KK), Ghana.

Address correspondence and reprint requests to Juliet Addo, MD; London School of Hygiene and Tropical Medicine; Non Communicable Disease Epidemiology Unit; Keppel Street; London WC 1E 7HT; UK; 44(0)20 7927 2245; 44(0)20 7580 6897 (fax); juliet.addo@lshtm.ac.uk

PATIENTS AND METHODS

The Amasaman sub-district is located ≈25 km from Accra, the capital city of Ghana. It has ≈152 communities, with an estimated population 233,884. Four of these stable communities were sampled purposively for participation. The communities, Sarpeiman, Opah, Ayikai Doblo, and Amamoley, had