

Original Article

Hypertension prevalence and awareness amongst a group of women attending 'August' meeting.

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ABSTRACT

The present study was designed to assess the prevalence of hypertension, awareness and control on a group of women attending an annual meeting in the South Eastern Nigeria popularly called 'August' meeting. A total 164 women (mean age: 54.4±12.7 yrs.) attending 'August' meeting had their BP measured and history of hypertension and/ or history of anti-hypertensive drug use taken. Hypertension was defined as systolic blood pressure ≥ 140mmHg and diastolic blood pressure ≥ 90mmHg. The prevalence of hypertension was 44.5% while 43.7% were aware they were hypertensive. 90.3% of those aware of being hypertensive were on anti-hypertensive drugs of which 13% had BP ≤ 140/90mmHg. There is a high prevalence of hypertension in our women and efforts should be made to ensure that their blood pressure is well controlled.

Keywords: women; blood pressure; history

INTRODUCTION

Hypertension is a disease without symptoms, frequently referred to as a "silent killer". It is a condition of great Public Health importance being a major risk factor for cardiovascular disease, renal disease and cerebral vascular accidents. It causes a large burden of ill-health and premature death^{1, 2} much of which is preventable with effective treatment³ It is becoming particularly an important public health problem in Sub-Sahara Africa.^{4, 5, 6} Previous estimates of hypertension prevalence from Nigeria^{7, 8, 9, 10, 11} were based on older definition of Systolic Blood Pressure (SBP) ≥ 160mmHg and Diastolic Blood Pressure (DBP) ≥ 95mmHg and thus had lower prevalence rates. The higher the blood pressure (BP) the greater the risks are for heart attack, heart failure, stroke and kidney disease^{12, 13, 14}. Conversely lower BP was associated with greater probability of survival to age 85 yrs. free of major co morbidities¹⁵. Latest surveys show that by age ≤ 50 yrs. prevalence is approximately 30%¹⁶ in rural Africa but > 50% in semi-urban West Africa and ≈ 50 – 60% in a mixed South African

population. Findings in Sao Paulo Brazil showed a prevalence of 55.9% in women 60 yrs. and above.¹⁷ In addition, prevalence rates are said to be rising. For example, in Ghana a prevalence of 28.3% was found in 2003¹⁸ and 3yrs. later in 2 rural communities in the same Ghana another group found a prevalence of 32.8%¹⁹. This rising prevalence provided the need for the study to determine the prevalence amongst a group of women and also to determine the level of awareness and control of hypertension amongst them.

SUBJECTS AND METHODS

Women attending "August" meeting at Naze in 2005 were recruited for the study. Naze is one of the communities that make up Owerri- North Local Government Area, Imo State of Nigeria. It is a suburb of Owerri, the capital of Imo State which is one of the five states that make-up the South East Zone of Nigeria, inhabited by Igbo speaking people. In the month of August every year, women married to men of the South East origin usually return to the towns and villages of their husbands irrespective of where they reside

in Nigeria to attend the "August" meeting. Initially it used to be mass return but later it became a delegate's conference. During these meetings various development projects are discussed as well as how to achieve the desired goals. Decisions taken at these "August" meetings play important roles in the lives of these towns and villages. It was therefore considered opportune by the authors when the executive of the Naze group approached the authors for a health talk during the 2005 "August" meeting. The topic Hypertension was chosen for discussion and in the course of the discussion it was discovered that participants were eager and interested requesting for measurement of their blood pressure and this gave birth to the study. A total of 164 women attending the 2005 "August" meeting at Naze, Owerri North Local Government Area, Imo State, were admitted into the study. These attendees represented all the socio- economic classes as amongst them were medical doctors, lawyers, teachers of secondary and primary schools, senior civil servants, market women etc, though not in equal proportions. Included in the sample were those who gave informed consent. Those who withheld consent were excluded from the study. Each participant was asked about history of hypertension and or antihypertensive drug use and age, followed by BP measurement. The BP was measured using a Standard Mercury Sphygmomanometer with appropriate cuff size, in a well ventilated room in the sitting position by nurses who are also attending the "August" meeting and had earlier been shown by the authors what is expected regarding BP measurement. Two BP readings were obtained at intervals of 2 minutes and the mean was used for analysis. Korotokoff I, V were taken as systolic and diastolic BP respectively. Hypertension was considered to be present if the participant gave a history of hypertension and or at the time taking medication or had Systolic BP (SBP) or Diastolic BP (DSP) $\geq 140/90$ mmHg.

STATISTICAL ANALYSIS

Statistical analysis was carried out using SPSS.

RESULTS

A total of 164 women attending 2005 "August" meeting at Naze were examined. The mean age (\pm S.d.) was 54.36 ± 12.73 yrs. The mean systolic blood pressure (SBP) was $141.63\text{mmHg} \pm 23.42$. The mean diastolic blood pressure (DBP) was $92.67\text{mmHg} \pm 14.67$. The prevalence of hypertension defined as Blood pressure $\geq 140/90\text{mmHg}$ was 44.5%. Only 43.7% were aware of being hypertensive 90.3% of those who are aware of their hypertension are on drugs. 13% of those on drugs have BP $\leq 140/90$. Age correlated with SBP $P > 0.003$ but did not correlate with DBP $P > 0.306$.

DISCUSSION

Our finding of a prevalence of 44% provides evidence of high prevalence of hypertension in a group of women attending "August" meeting in South East Nigeria. The observed prevalence of 44% is lower than the 54.6% recorded in 2007 in Ghana²⁰ Comparison with previous surveys^{7, 8, 9, 10, 21} are problematic since these surveys occurred in different study samples with different age structures and diverse definitions of hypertension. The earlier studies in Nigeria used SBP ≥ 160 and DBP $\geq 95\text{mmHg}$ while newer studies used SBP ≥ 140 and DBP ≥ 90 . This being so it is impossible to compare the result obtained using these cut off points. The difference in prevalence rates may be partly explained by the sampling methods. Studies^{16, 19, 22} have shown that prevalence of hypertension in Sub-Saharan Africa is significantly higher in the urban population compared to the rural population. Some of the studies were on urban dwellers, some on rural while others were on both urban and rural dwellers. Those recruited for this study it should be remembered were urban dwellers who had come for 'August' meeting. However, hypertension prevalence appears to be increasing worldwide. In 2003 a prevalence of 28.4% was found in a Ghanaian population¹⁸

which increased to 32.8% in 2006¹⁹. In the same Ghana in 2007 a prevalence of 54.6% was found in a population of women²⁰. The prevalence of hypertension in our study is higher than most comparable studies in Nigeria. However recent studies elsewhere showed prevalence rates in women of 38.6%²³ in one population and 55.4%¹⁷ in another population. The basis for observed increase in hypertension prevalence is not well known. However considering the socio-economic challenges facing families in Nigeria, there are indications that Psychological Stress has been related to higher BP and unfavorable cardiovascular profile²⁴

Our finding of high prevalence of hypertension provides evidence of the increasing cardiovascular burden due to hypertension in Sub-Saharan Africa. 43.7% of the study population was aware of their hypertension. This compares favorably with the study which showed an awareness of 46.1%²⁵ and better than the study in Ghana with an awareness of 34%¹⁸ and that in Korea with an awareness of 22.9%²⁶. This level of awareness is encouraging as hypertension is diagnosed by measuring blood pressure which is a simple, in-expensive, rapid and non-invasive procedure.

Of those who are hypertensive 90.3% are on anti-hypertensive drugs. This is rather a high proportion when compared to other studies²⁰. The population it ought to be remembered is not a rural population but rather from various urban centers of Nigeria. It is a literate group as they were delegates representing their members at the 'August' Meeting and this may explain the high awareness rate. However about 13% of those on drugs have BP ≤ 140/90mmHg.

This is better than the studies from Ghana of 4%¹⁸ and 4.4%²⁰ and compares favorably with the study from Korea with 10.7%²⁶ control rate. The overall health impact of low control rates is significant. Patient non compliance with treatment is common in hypertension therapy. Various reasons have been adduced for non compliance among which are lack of education, lack of awareness of hypertension and its risks for cardiovascular diseases in the lay population, misguided drug use, availability and costs^{27, 28, 29}. Anecdotally long-term drug therapy is not a welcome concept. The authors hold that proper education through programs directed at such meetings will heighten the success of management strategies in hypertensive patients.

The mean age of the study population is 54.36±12.73yr and thus an older age group. The higher prevalence could partly be explained by the age of the population as it is known that Blood Pressure correlated positively with age¹⁰. It has been said that loss of estrogen, which has been shown to improve endothelial function³⁰ occurs postmenopausal and increases the risk of cardiovascular disease in women^{31, 32}. Even though prevalence of hypertension increases dramatically with age, it is important to realize that the burden of hypertension is occurring in the middle age group and therefore efforts aimed at reducing the burden should be directed to those of middle age.

The study has shown a high prevalence of hypertension in our women and thus a significant public health problem. Identification of women with hypertension is essential as elevated blood pressure can be controlled by taking prescribed medication thereby reducing cardiovascular burden.

Fig. 1: The mean, standard deviation, minimum and maximum for age, SBP and DBP.

	Age yrs	SBP mmHg	DBP mmHg
Mean	54.36	141.68	92.67
S.d.	12.73	24.42	14.67
Minimum	26.00	100.00	60.00
Maximum	88.00	230.00	140.00

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