

Original Research Article

Prevalence of hypertension among adults attending Faith-based Centres in Abak Township, Akwa Ibom State, Nigeria

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Abstract

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Hypertension is the most prevalent cardiovascular disease globally and one of the major cause of morbidity and mortality among adults black. Apart from secular work, many adults in our environment expend a sizeable part of their time, energy and income on activities at faith-based centres. Our study evaluated the prevalence of hypertension among adults who attend faith-based centres in Abak, a metropolitan city in Akwa Ibom State, the South-South region of Nigeria. Out of the 393 subjects assessed, 62.8% individuals were found to have blood pressure (BP) above 140/90 mmHg, which exceeds the reported average global prevalence for hypertension. 50% of young adults (18 – 45 years) had blood pressure above 140/90 mmHg, 60.1 % of the middle aged persons (46 – 60 years) had BP above 140/90 mmHg, while 85.3% of the elderly (above 60 years) assessed had BP above 140/90 mmHg. Sex distribution of individuals with BP>140/90 mmHg showed 55.5% males, while 44.5% were females. Out of the 140 young adults assessed, 42.9% were JNC-6 stage 1, 35.7% were pre-hypertensive, while 14.2% had normal BP. The cause of this high prevalence of BP in Abak may be multifactorial, including ignorance and lack of health education, over-dependence on spiritual solutions on health issues and low socioeconomic status.

Keywords: Abak, Blood pressure, Hypertension, Religious worshippers

INTRODUCTION

Hypertension is a sustained increase in blood pressure above what is considered normal for age and sex. A sustained diastolic pressure greater than 90 mmHg, or a sustained systolic pressure in excess of 140 mmHg, is considered to constitute hypertension (Oparil, 2000). The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC 7) defines a hypertensive crisis as individuals with a systolic blood pressure of greater than

179 mmHg or a diastolic that is greater than 109 mmHg (JNC, 2003).

Hypertension is the most prevalent cardiovascular disorder in the world today, affecting over 100 million people in the world (Curzio and Kennedy, 1997). When the total global impact of known risk factors on the overall burden of disease is calculated, hypertension comes behind only undernutrition and unsafe sex (Karplan, 2006). Of all the potentially modifiable risk factors for

myocardial infarction in 52 countries, hypertension is exceeded only by smoking (Yusuf et al., 2004)[5]. As reviewed by Kearney et al. (2005), the overall worldwide prevalence of hypertension is approximately 26% of the adult population, with marked differences between countries. Almost 40% of black adult have been affected and more than half of the entire black population over the age 55 years has hypertension. It accounts for 6 % of deaths worldwide. Average systolic blood pressure is higher for men than for women during early adulthood, although among older individuals the age-related rate of rise is steeper for women. Among individuals aged 60 and older, systolic blood pressure of women is higher than those of men. The burden of hypertension increases with age, and among individuals aged 60 and above, hypertension prevalence is 65.4%.

It is a very common and serious condition that can lead to or complicate many health problems. The risk of cardiovascular morbidity and mortality is directly correlated with blood pressure. Risks of stroke, myocardial infarction, angina, heart failure, kidney failure or early death from a cardiovascular cause are directly correlated with blood pressure. Hypertension is often called "the silent killer" because it generally has no symptoms until serious complications develop (Thomas, 2007). The present study examined the prevalence of hypertension in individuals of eighteen years and above, attends faith-based centres in Abak, an ancient city and local government headquarters in Akwa Ibom State, Nigeria. The World Hypertension League (WHL), an umbrella organization of 85 national hypertension societies and leagues, recognized that more than 50% of those having hypertension worldwide are unaware of their condition.

METHODOLOGY

The setting of the study

Abak town, the local government headquarters of Abak Local government area is located about 18 kilometres from Uyo, the capital city of Akwa Ibom State in the oil rich South-south region of Nigeria. It has a land mass of 304 square kilometres. Abak is a concentration point for the Annang tribe as most of them tend to settle there. It has very strong socio-economic potential hampered, though by low infrastructural development. Abak has a total population of 139,090 people comprising of 73,578 males and 65,512 females (NPCN, 2006).

Because Abak is rich in mineral deposits such as sand, gravel, salt, clay, and crude oil it supplies abundant palm produce, cassava and various vegetables and as such, the people are predominantly local miners, farmers and sundry traders, while many are into pottery and weaving.

The health care delivery system in Abak operates through integrated primary health care services and secondary health care strategies (Egwu, 1996). Abak has about nine primary health care services deployed to carry out preventive health care measures, health education, maternal care, infant and child care and immunization, mass screening, social work and environmental and occupational health. There are two general hospitals namely Mercy Hospital, Abak and General Hospital, Ukpom, which provide secondary health care delivery to inhabitants of Abak (Aster and Akpan, 2009). The nearest tertiary health facility is the University of Uyo Teaching Hospital which is situated about 15km from Abak town. This health care delivery system is committed to providing quality health care services for the immediate community (Egwu, 1996).

Selection of Sample and Measurement of Blood Pressure

Faith-based centres where regular members congregate weekly were used as points of data collection. 393 individuals were randomly selected from 10 different congregations in the city. Biodata of subjects were recorded after the necessary consents were obtained. Blood pressure of the subjects were measured based the procedure documented by Hambly (2000) and Henry (2011). The blood pressures were measured at two different visits to the collection centres and at sitting position ((JNC, 2003).

RESULTS

Out of the 393 subjects assessed, 62.8% (247) individuals were found to have blood pressure (BP) above 140/90 mmHg, while 37.2% (146) individuals had blood pressure below 140/90 mmHg. Of the 393 individuals examined, individuals within the aged 18-39 years (young adults) were 140, those aged 40-59 (middle aged) years were 158, while the elderly (60 years and above) were 95. Blood pressure of young adults assessed showed that 50% (70) had blood pressure above 140/90 mmHg, 60.1 % (158) of the middle aged persons had BP above 140/90 mmHg, while 85.3% (86) of the elderly assessed had BP above 140/90 mmHg (Table 1).

Sex distribution of hypertensive subjects with BP above 140/90 mmHg showed that 55.5% were males, while females were 44.5%. Young adults assessed with average BP above 140/90 mmHg were 60% (42) male, while the females were 40% (28). Middle-aged and elderly subjects assessed with BP above 140/90 mmHg showed that males were 57.9% and 48.8% respectively,

Table 1. Prevalence of Hypertension among the Young Adults, Middle-Aged and the Elderly in Abak, Akwa Ibom State

Age (yrs)	No. of Subjects Tested	Normotensives (<140/90 mmHg)	Hypertensives (>140/90 mmHg)	% Normotensive	% Hypertensive
18-39 (Young adult)	140	70	70	50.0	50.0
40-59 (Middle-aged)	158	63	95	39.1	60.1
Above 60 (elderly)	95	13	82	14.7	85.3
Total	393	146	247	37.2	62.8

Table 2. Sex distribution of hypertensive individuals with Blood Pressure above 140/90 mmHg in Abak, Akwa Ibom State.

Age	No. of Hypertensives	Male	Female	% Male	% Female
19-39 (Young adult)	70	42	28	60.0	40.0
40-59 (Middle-age)	95	55	40	57.9	42.1
Above 60 (Elderly)	82	40	42	48.8	51.2
Total	247	137	110	55.5	44.5

Table 3. Severity of Hypertension among the Young Adults, Middle-Aged and the Elderly in Abak (based on JNC 6).

Age (yrs)	No. of subjects tested	Normal Blood Pressure (<120/80 mmHg)	Pre-Hypertension (120-136/80-90 mmHg)	Stage 1 (140-159/90-99 mmHg)	Stage 2 (\geq 160/100 mmHg)
18-39 (Young adult)	140	20	50	60	10
40-59 (Middle-aged)	158	8	55	55	40
Above 60 (elderly)	95	nil	13	27	55
Total	393	28	128	132	105
Percentage	100	7.1	32.6	33.6	26.7

while females were 42.1% and 51.2% respectively (Table 2)

Based on the classification of the Joint National Committee (J. N. C.) on prevention, detection, evaluation and treatment of hypertension, 20 of the 140 of the young adults assessed had normal blood pressure (<120/80 mmHg), 50 were pre-hypertensive (120-139/80-90 mmHg), 60 were stage1 hypertensive, while 10 subjects were stage2 hypertensive. Out of the 158 middle-aged subjects assessed, 8 had normal BP, 55 were pre-hypertensive, 55 were stage1 hypertensive, while 40 were stage 2 hypertensive. None of the 95 elderly subjects assessed had normal blood pressure by JNC-6 classification, 13 were pre-hypertensive, 27 were stage1 hypertensive and 55 subjects were stage 2 hypertensive (Table 3).

DISCUSSION

Our study showed that there is a high prevalence of hypertension among religious worshippers in Abak. The observed prevalence (62.8%) exceeds the reported average global prevalence. Earlier research had shown that Nigerians are particularly susceptible to hypertension and its complications such as disabling and fatal strokes which remain a major cause of morbidity and mortality (Iyalomhe et al, 2008; Iman and Olorunfemi, 2002; Akinkugbe, 2003). Reported studies showed that 3.4% (men) and 6.8% (women) in rural India and as high as 68.9% (men) and 72.5% (women) in Poland are hypertensive. High prevalence of hypertension has been associated with multiple factors such as black race, excessive salt intake, alcoholism diets and excess body weight (Rahmouni et al, 2005; Katori and Majima, 2006;

Jurgens and Graudal 2004).

Our study also showed exponential increased prevalence of hypertension with age. Half of the tested population of young adults and a significant majority of the middle aged individuals who attended worship centres in Abak were hypertensive. The average blood pressure of elderly individuals (60 years and above), who attended religious worship centres was steeply higher than the reported global average. This exponential increase in prevalence of hypertension with age may be due to lack screening and intervention programmes, over-reliance on faith based, spiritual interventions, lack of health education and poor socioeconomic status and consumption of herbal remedies people (Carretero and Oparil, 2000; O'Brien *et al* 2007; Grossman and Messerli, 2012).

On sex distribution, our study showed that more young and middle aged male religious worshippers in Abak were hypertensive than their female counterparts. However, the elderly female worshippers recorded a higher prevalence than the elderly males. Earlier researchers reported that hypertension is more prevalent in men, but observed that menopause tends to decrease this difference (Carretero and Oparil, 2000).

Based on severity, our study showed that majority (33.6%) of the hypertensive religious worshippers in Abak are in JNC-6 stage 1 hypertension, while a significant number (26.7%) of hypertensive worshippers are in JNC-6 stage 2. This data revealed poor control a high predisposition of the population to complications of hypertension notably cerebrovascular accident, cardiac diseases and nephropathies, retinopathies. The pattern of hypertensive complication among this population is subject for future research.

CONCLUSION

Form our results we concluded that the prevalence of hypertension among religious worshippers in Abak town is alarmingly high, significantly involving the young adults, the middle aged and the elderly. The cause of this high prevalence may be multifactorial, including ignorance and lack of health education, over-dependence on spiritual solution to health issues and low socioeconomic status.

Conflict of Interest

No conflicts of interest

REFERENCES

- Akinkugbe OO (2003). Current epidemiology of hypertension in Nigeria. *Arch. Ibadan Med.* 1: 3-5.
- Atser J, Akpan PA (2009). Spatial distribution and accessibility of health facilities in Akwa Ibom State, Nigeria. *Ethiopian J. Environ. Stud. Manag.* 2(2): 49-57.
- Carretero OA, Oparil S (2000). Essential hypertension. Part I: definition and etiology. *Circulation* 101 (3): 329-35
- Curzio SA, Kennedy BK (1997). Severe renovascular hypertension in an infant with congenital solitary pelvic kidney. *J. Pub. Health Medicine*, 21: 437-440.
- Egwu IN (1996). *Primary Health Care System in Nigeria: Theory, Practice And Perspectives*. Elmore Printing and Publishing Co., Lagos, pp 53.
- Grossman E, Messerli FH (January 2012). "Drug-induced Hypertension: An Unappreciated Cause of Secondary Hypertension". *Am. J. Med.* 125 (1): 14-22
- Hambly P (2000). Measuring the blood pressure. *Update in Anaesthesia*, 6(11): 1
- Henry IB (2011). Standard blood pressure measurement techniques. *Hypertension*, 12(10): 231-233.
- Iman I, Olorunfemi G (2002). The profile of stroke in Nigeria's federal capital territory. *Trop. Doct.* 32: 209-212.
- Joint National Committee (JNC) (2003). The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *J. Ame. Med. Assoc.* 289:2560-71.
- Jürgens G, Graudal NA (2004). Graudal, Niels Albert. ed. "Effects of low sodium diet versus high sodium diet on blood pressure, renin, aldosterone, catecholamines, cholesterols, and triglyceride". *Cochrane Database Syst Rev* (1): CD004022
- Kaplan B, Szabo LL (1979). Enzyme and the liver tests of hepatic function. In: *Clinical Chemistry: Interpretation and Techniques*. Lea and Febiger. Philadelphia, pp 203.
- Katori M, Majima M (2006). A Missing Link Between a High Salt Intake and Blood Pressure Increase, <http://www.jstage.jst.go.jp/article/jphs/100/5/370>
- Kearney PM, Whelton M, Reynolds K, Muntner P, Whelton PK, He J (2005). Global burden of hypertension: analysis of worldwide data *Lancet* 365 (9455): 217-23.
- Lyalomhe GBS, Omogbai EK1, Ozolua RI, Dada FL, Lyalomhe OOB (2008). Electrolyte profiles in Nigerian patients with essential Hypertension. *Afr. J. Biotechnol.* Vol. 7 (10), pp. 1404-1408
- National Population Commission of Nigeria (NPCN) (2006). Population census of the Federal Republic of Nigeria: Analytical report. *NPCN Population Bulletin*, 56(1): 33-54.
- O'Brien E, Beevers D G, Lip GYH (2007). *ABC of hypertension*. London: BMJ Books. ISBN 1-4051-3061-X.
- Oparil S, Zarnam MA, Calhoun DA (2003). Pathogenesis of hypertension. *Annals of Internal Medicine*, 139: 761-776.
- Rahmouni K, Correia ML, Haynes WG, Mark AL (January 2005). "Obesity-associated hypertension: new insights into mechanisms". *Hypertension* 45 (1): 9-14. doi:10.1161/01.HYP.0000151325.83008.b4. PMID 15583075.
- Thomas M (2007). Hypertension – clinical features and investigation. *Hospital Pharmacist*, 14: 111-116.
- Yusuf S, Hawken S, Unpuu S, et al., (Provide names of other authors) (2004). Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. *Lancet*, 364:937-952.