

## KNOWLEDGE AND PRACTICE OF HYPERTENSIVE PATIENTS AS SEEN IN A TERTIARY HOSPITAL IN THE MIDDLE BELT OF NIGERIA

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### ABSTRACT

**Background:** Hypertension remains the commonest non-communicable disease in Nigeria and a leading cause of cardiovascular morbidity and mortality. Knowledge and practice among hypertensive patients were therefore assessed as a prelude towards attaining better blood pressure control.

**Materials and Method:** 224 consecutive hypertensive patients were prospectively studied using a pre-tested questionnaire.

**Results:** Majority of the hypertensive patients attending University of Ilorin Teaching Hospital were either traders or business men/women (44.5%). Only 35.8% had their blood pressure well controlled and about 61% were diagnosed for the first time to be hypertensive in the teaching hospital. 34% of the patients commuted a distance of more than 5km to the hospital to receive antihypertensive care. 52% and 25% of the patients checked their blood pressure monthly and three-monthly respectively. One patient volunteered history of smoking. 48% and 51.8% knew that smoking increases the propensity to develop complications and that exercise is beneficial for the control of blood pressure respectively. Knowledge of the possible complications of hypertension was very poor as 58.9% of the patients scored less than average. Only 41.1% and 1.8% of the patients were aware that excessive salt and fat intake could adversely affect the control of hypertension respectively.

**Conclusion:** Blood pressure control is still unacceptably poor among hypertensive Nigerians. This may not be unconnected with the poor knowledge of hypertension and adverse practices by the patients.

**Key Words:** Knowledge, Practice, Hypertension, Nigerians.

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### INTRODUCTION

Hypertension (HBP) remains the commonest non-communicable disease in Nigeria<sup>1</sup> and a leading cause of myocardial infarction, heart failure and stroke worldwide<sup>2,3</sup>. It is established that adequate blood pressure (BP) control does not completely obviate the risk of developing complications among hypertensives<sup>4</sup>. Even more worrisome is the revelation that up to two-thirds of known hypertensives who are on treatment are inadequately controlled<sup>5,6</sup>. Knowledge of the cause, course and consequences of HBP by the hypertensive patient (HP) has an influence on its control just as the practice(s) by the patient. This assertion has been thoroughly ventilated in the work by Ikpeme<sup>5</sup>. Various studies have been done to underscore the role of health education and other reinforcement mechanisms in achieving good BP control among HP. This study is therefore another attempt at evaluating the knowledge and practice among Nigerian hypertensives.

### MATERIALS AND METHODS

The study was embarked upon at University of Ilorin Teaching Hospital (UIITH), Nigeria in the year 2002. A total of 224 HP seen consecutively by the authors were enrolled into the study. HBP in this context was diagnosed using the recommendation of JNC (VII) on the detection, evaluation and monitoring of high blood pressure<sup>7</sup>. Subjects were either HP on antihypertensive drugs or newly referred HP to the authors for initiation of therapy. BP was measured in the sitting position using Accosson mercury sphygmomanometer, after resting for about 5-10 minutes using the right upper arm and an appropriately-sized cuff. Systolic and diastolic BP were taken at the first and fifth Korotkoff's sound respectively. A minimum of three different readings were taken at five minutes' interval and the average taken. The study was accomplished using a pre-tested questionnaire administered either by the investigators or other physicians working with them and who have been specifically trained to do so. Occasionally, enrollees were made to fill-in the questionnaire themselves if they were educated enough to do so. Scoring for the knowledge of complications of hypertension was done by awarding score of one for every complication of HBP

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mentioned right. Enrollees were expected to be able to mention at least five to obtain the maximum score of five.

Data was then analyzed using Epi-info version 6 computer software. Statistical significance of difference between proportions was tested using Chi-square with a P-value of less than 0.05 taken as being significant.

## RESULTS

A total of 224 HP were studied consisting of 100 males (44.6%). The age ranged between 35-82 years with mean and standard deviation (SD) being 57.7 and 12 years respectively.

### Occupational distribution:

The distribution by occupation of the study population is as shown in figure 1. Majority (44.5%) were either traders or business men/women while 21.5% were retirees or unemployed. 21.5% were employed in organized private /public sector. 12.5% were full-time housewives.

### Duration of hypertension :

Eighty Seven (39%) of the respondents had been hypertensive for over 5 years, 65 (29%) for between 2 and 5 years and 72 (32%) for less than 2 years. Majority (60.7%) of the patients were first diagnosed to be hypertensive at UITH.

### Practice:

#### *Distance commuted to receive care :*

Distance commuted by the patients to receive care for HBP are depicted in Table 1. About forty per cent commuted distances greater than 5 km to receive care while only 25% commuted less than half a kilometer to receive care.

#### *Frequency of BP check:*

Majority of the patients checked their BP once a month at the hospital on appointment (51.8%). 19.6% checked it more often, that is sporadically as they come across BP apparatus and 25% once every three months. 3.6% checked it even more than three months apart. Less than 5% had automated electronic machine or oscillometer for self assessment at home.

#### *Smoking:*

Only one of the patients (1.8%) volunteered history of smoking. About half of them (48.2%) believed that smoking has no effect on propensity to develop complications from HBP.

### Knowledge :

#### *Exercise:*

Only 51.8% of the patients knew that exercise is beneficial for the control of HBP. 44.6% were completely ignorant of any role whatsoever and 3.6% even opined that it might be dangerous.

#### *Complications:*

Table 2 shows the scores on knowledge of possible complications of HBP out of a total score of five.

58.9% of the respondents scored less than average(2.5) while only 7.1% could list 5 possible complications of HBP.

#### *Food:*

Less than half the total no of enrollee (41.1%) and indeed only 1.8% were aware that salt and fat intake respectively could have adverse effect on the control of HBP and need be cut down. 17.9% did not believe that excessive intake of any particular substance could adversely affect the control of their HBP.

#### *Control of HBP:*

Table 3 shows the average BP reading at the clinic on the day of administration of questionnaire . 35.7% of the patients had their BP well controlled ( Systolic BP < 140mmHg and Diastolic BP < 90mmHg) in spite of being a known hypertensive, on medication and being followed up. About 61% were first diagnosed to be hypertensive in the teaching hospital which is supposed to be a tertiary care.

Table 1: **Distance Commuted By Patients to Receive Hypertension Care in Our Hospital.**

Distance (m)	No of Patients	Percentage (%)
1-500	56	25
500-1000	44	19.6
1001-5000	48	21.4
> 5000	76	33.9

Table 2: **Knowledge of Respondents on Possible Complications of Hypertension.**

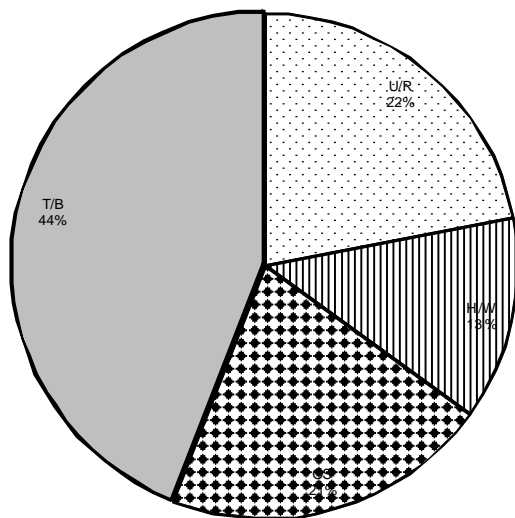
Score	No of Patients	Percentage (%)
0	60	26.8
1	24	10.7
2	48	21.4
3	16	7.1
4	60	26.8
5	16	7.1

NB: Maximum score is 5/5.

Table 3: **Systolic Blood Pressure (SBP) Reading On the Day of Administration of Questionnaire.**

SBP	No of Patients	Percentage (%)
< 130	24	10.7
130-139	56	25
140-159	88	39.3
≥ 160	56	25

**Figure 1: Occupational distribution**



**Key:**

**H/W** Housewife

**T/B** Trading/Business

**OS** Organised sector

**U/R** Unemployed/Retiree

**DISCUSSION**

Majority of the patients being managed for HBP at UITH were either traders or business men and women. Only 21.5% were employed in the private/public sector. This may not be unrelated to the fact that there is a civil service clinic in Ilorin established by the state government which majority of their workers attends. Suffice to add however, that most of these traders were petty traders judging from their monthly earnings as earlier published<sup>8</sup>. This would have a bearing on the affordability of antihypertensive drugs and by extension, compliance to therapy and status of BP control. Even though UITH is a tertiary and referral hospital, it is noteworthy that as high as 60.79% of the hypertensive population enrolled into this study was first diagnosed in the hospital. This is a reflection of the lopsidedness in the pattern of attendance at the various levels of care in the state in particular and the country at large<sup>9</sup>. Ideally, only HP with difficult management problems such as refractory hypertension or secondary hypertension needs be seen at a tertiary level of care as majority could be followed up at secondary level of care or even primary. This work has further brought to the fore the need to improve the operational capacity of both the primary and secondary levels of care as a way of lessening the undue pressure on tertiary level. This would not only ensure that services are more efficiently rendered but would also allow the teaching hospitals devote more attention to other statutory responsibilities of research and training.

About 34% of the patients covered a distance of over 5 km to be seen for follow up. These were mostly patients from neighboring villages and towns with either non-functional or ill-equipped health centers in their locality. It is a common practice for patients to devote the whole day to keeping their appointments and seeing their doctors thereby paralyzing every other activity for that day. Half of the enrollee checked their BP once a month only at our hospital on appointment and about a quarter of them once every 3 months. The implication of this on reduction of risk of complications on HBP can not be over-emphasized. Contrary to what is obtainable in the western world, only one of the patients (1.8%) volunteered history of smoking and about half of the patients were of the opinion that smoking has no effect on the propensity to develop complications from HBP. Salako also reported no history of smoking among females and history of smoking in only 2.3% of males in an earlier work at University College Hospital, Ibadan<sup>6</sup>. Arguably, there could be some degree of under-reporting of smoking among the enrollee and it could also be inferred that a significant proportion shunned smoking not necessarily because of their disease or associated medical risk but for other reasons. These reasons may have to do with the fact that the culture in Ilorin and most parts of Nigeria frowns at smoking particularly among the females.

Awareness about the beneficial effect of exercise on HBP was very poor among the patients as only half of them (51.8%) opined that exercise was beneficial. 44.6% were completely ignorant of the role of exercise on HBP. Knowledge of the beneficial role of exercise on HBP is appreciably higher among hypertensive Whites<sup>9</sup>. This discovery is worrisome knowing-fully-well that exercise has been found not only to lower BP but also reduce over- all cardiovascular risk among HP<sup>10</sup>. This observation is similar to the experience reported by Ikeme among his patients<sup>5</sup>.

Knowledge of the enrollee on possible complications of HBP was abysmally poor. Up to 60% of the patients could not mention three possible complications and only 7.1% could give up to five different complications and these were mostly retired medical personnel and well educated ones among them. Equally worrisome was the paucity of information available to the patients on the role of salt and fatty food on the control of BP and development of complications. Knowledge of the role of salt was significantly better than fatty food substances. This is similar to earlier finding by Suter *et al* among White population<sup>11</sup>.

Correlation between knowledge of complications and levels of BP was very weak in this study (  $r = -0.04$  for SBP {F statistics = 0.08 } and 0.01 for DBP

{F statistics = 0.01}). While Speers *et al* demonstrated good correlation between levels of knowledge and BP<sup>12</sup>, Bloomfield *et al* reported that there was no correlation between knowledge and level of BP<sup>13</sup>.

## CONCLUSION

Blood pressure control is still unacceptably poor among hypertensive Nigerians. This may not be unconnected with the poor knowledge of HBP and adverse practices by the patients.

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