

A Questionnaire Based Assessment of Awareness Concerning Hypertension and its Management among the General Practitioners

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Abstract

Aim: To assess the knowledge and awareness of the general practitioners concerning hypertension and its management.

Material & Methods: The present cross-sectional questionnaire-based study was carried out by the Department of Medical Cardiology, Indira Gandhi Institute of Cardiology, Patna, Bihar, India. The present study included a total of 100 general practitioners from the Indian population.

Results: On assessing the presenting symptoms of hypertension in the study subjects it was seen that the most common presenting symptom was fatigue which was reported by 77% subjects followed by palpitations seen in 41% study subjects. Concerning the assessment of parameters concerning the monitoring of the blood pressure, the readings one time were taken by 4%, two times by 42% subjects.

Conclusion: The present study concludes that general physicians were well-informed about the diagnosis and management of the subjects with hypertension.

Keywords: Awareness, diagnosis, general practitioners, hypertension, management, treatment

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Introduction

Hypertension constitutes a global problem underlying many of the cardiovascular morbidity and mortality the world over. [1] Major factors identified for under-treatment of hypertension are Patients factors as it relates to poor drug compliance which many times is related to poor understanding of therapy and

poverty; [2] and of course physicians inertia [3-4] which may have its root in lack of familiarity with existing practice guidelines.

Despite the large population being affected by hypertension, there exists a lack of awareness among the Indian population concerning uncontrolled and unmanaged

hypertension as well as in the global population. Nearly 50-75% of the hypertensives are not managed properly in the health care sector. In Indian hypertensives, the majority of the subjects are not aware of their hypertensive status owing to a lack of screening and understanding about the disease. General physicians play a vital role in diagnosing and managing disease as they are the first individuals to contact subjects, their families, and their community. General practitioners in India provides comprehensive health care to subjects from all age groups and are the first person to assess the subject. [4]

Previous literature data assessing the general practitioners for following hypertension guidelines are scarce in the literature with various shortcomings. With the incidence of hypertension to be nearly 20% and is associated with additional risk factors, treatment of related comorbidities is vital considering the assessment of physician's adherence to hypertension recommendations. [5]

Hence, the present study was conducted to assess the knowledge and awareness of the general practitioners concerning hypertension and its management.

Material & Methods:

The present cross-sectional questionnaire-based study was carried out by the Department of Medical Cardiology, Indira Gandhi Institute of Cardiology, Patna, Bihar, India for one year.

The present study included a total of 100 general practitioners from the Indian population. After explaining the detailed study design, informed consent was taken from all the subjects in written as well as verbal form, the study included general practitioners who were willing to participate in the study.

The identity of the practitioners was kept anonymous. Following the standard books of internal medicine and Joint National

committee, a detailed structured questionnaire was formed to be given to the practitioners. The questionnaire consisted of various parameters including choice of hypertensive agents, consideration of BP level for starting pharmacologic therapy, use of non-pharmacologic therapy, estimating new hypertension cases, and diagnosis of prehypertension and hypertension cases.

Each general practitioner was approached personally and was asked to fill the questionnaire. After filling, each questionnaire was filled and was checked thoroughly, and was any question left was then filled by the practitioners.

The collected data were subjected to the statistical evaluation using SPSS software version 21 (Chicago, IL, USA) and one-way ANOVA and t-test for results formulation. The data were expressed in percentage and number and mean and standard deviation. The level of significance was kept at $p < 0.05$.

Results:

The present study was conducted to assess the knowledge and awareness of the general practitioners concerning hypertension and its management. The present study included a total of 100 general practitioners from the Indian population from both genders. The mean age of the study subjects was 20-60 years and the mean age of 41.63 ± 6.26 years. The study included 12 females and 88 males.

On assessing the presenting symptoms of hypertension in the study subjects it was seen that the most common presenting symptom was fatigue which was reported by 77% subjects followed by palpitations seen in 41% study subjects. Another reported symptom was dizziness reported by 33% study subjects and the least common symptom was a headache in the morning reported in 24% study subjects as shown in Table 1.

Table 1: Presenting symptoms of Hypertension in the study subjects

Symptom	Number (n %)
Fatigue	77
Palpitation	41
Dizziness	33
Headache in the morning	24

Concerning the assessment of parameters concerning the monitoring of the blood pressure, the readings one time were taken by 4%, two times by 42% subjects. The preferred position for recording blood pressure by general practitioners was

standing used by 19% practitioners, supine by 26% practitioners, and sitting by 54% general practitioners. The cuff placement was appropriately done at the level of heart covering 2/3rd of the arm was used by 83% practitioners as depicted in Table 2.

Table 2: Hypertension recording parameters used by the study subjects

Blood Pressure parameter		Number (n %)
Readings number for hypertension diagnosis	One	4
	Two	42
	Three	54
Preferred patient position	Standing	19
	Supine	26
	Sitting	54
Cuff placement	At heart 2/3 rd arm level covering	83

Discussion:

In a study in Germany, it was estimated that up to 700,000 subjects with hypertension are seen daily by primary care practitioners with an abysmal control rate of about 19%. [7] In a household survey in Nigeria, hypertension was found to be highly prevalent in the community with poor awareness of high blood pressure status and a woeful 5% blood pressure control rate in men and 17.5% in females.[8]A hospital-based study documented a better rate of control of 35.8% in subjects with hypertension receiving care in a tertiary care facility. [9] This rate is however still very poor.

Affordability, patient attitude, and belief remain a major problem, but one study alluded to physician related factors as also playing a prominent role as per compliance with medications and BP control. [10] Furthermore, failure to intensify antihypertensive medications is

another strong link in the chain of widespread poor BP control which is dependent almost entirely on physician's knowledge and attitude. [11]

In Australia, a survey of general practice supervisors and registrars showed that hypertension was the most common problem seen by general practitioners but remained undertreated; reasons for under treatment included lack of clarity and consistency in evidence-based guidelines, especially regarding first line treatment [12]. However, nearly 75% to 80% of untreated hypertensive adults in an Australian hypertensive medication survey had their blood pressure measured within 12 months preceding the survey [12-13]. In Croatia, the majority of physicians said that they support using guidelines for evaluating cardiovascular risk, but only half of physicians used them, and their knowledge of specific guidelines was unsatisfactory [14].

Concerning the required tests that general practitioners advise to the hypertensive subjects for diagnosing new cases of hypertension, it was seen that serum potassium levels were conducted on 68% of the study subjects, blood sugar by 86% of general practitioners, lipid profile by 90% of the practitioners, serum creatinine was prescribed by 78% of the practitioners, and serum creatinine in 95% of the subjects as prescribed by the practitioners included in the study. These findings were comparable to the studies of Erdine S et al [15] in 2013, Redon J et al [16] in 2011 and Yadav RS et al [17] in 2021 where authors have prescribed similar tests to the hypertensive subjects. [18]

Conclusion:

The present study concluded that general physicians were found adequately aware about the diagnosis and management of the subjects with hypertension. This research provides insight into the development of recommendations for the treatment of HTN by GPs, which can be used in the future to achieve better management at the primary health-care level.

References:

1. Kearney PM, Whelton M, Reynolds K, Muntner P, Whelton PK, He J. Global burden of hypertension: Analysis of worldwide data. *Lancet* 2005; 365:217-23.
2. Flack JM, Ferdinand KC, Nasser SA. Epidemiology of hypertension and cardiovascular disease in African Americans. *J Clin Hypertens (Greenwich)* 2003; 5:5-11.
3. Gil-Guillen V, Orozco-Beltran D, Perez RP, Alfonso JL, Redon J, Pertusa-Martinez S, et al. Clinical inertia in diagnosis and treatment of hypertension in primary care: Quantification and associated factors. *Blood Press* 2010; 19:3-10.
4. Asai Y, Heller R, Kajii E. Hypertension control and medication increase in primary care. *J Hum Hypertens* 2002; 16:313-8.
5. Gupta R, Ram CVS. Hypertension epidemiology in India: emerging aspects. *Curr Opin Cardiol.* 2019; 34:33 1–41.
6. Burnier, M. & Egan, B. M. Adherence in hypertension. *Circ. Res.* 2019;124: 1124–40.
7. Sharma AM, Wittchen HU, Kirch W, Pittrow D, Ritz E, Goke B, et al. HYDRA Study Group. High prevalence and poor control of hypertension in primary care: Cross-sectional study. *J Hypertens* 2004;22: 479-86.
8. Ekwunife OI, Udeogaranya PO, Nwatu IL. Prevalence, awareness, treatment and control of hypertension in a Nigerian population. *Health* 2010; 2:73 1-5.
9. Katibi IA, Olarinoye JK, Kuranga SA. Knowledge and practice of hypertensive patients as seen in a tertiary hospital in the middle belt of Nigeria. *Niger J ClinPract* 2010; 13:159-62.
10. Amira CO, Okubadejo NU. Factors influencing non-compliance with anti-hypertensive drug therapy in Nigerians. *Niger Postgrad Med J* 2007; 14:325-9.
11. Ferrari P, Hess L, Pechere-Bertschi A, Muggli F, Burnier M. Reasons for not intensifying antihypertensive treatment (RIAT): A primary care antihypertensive intervention study. *J Hypertens* 2004; 22:1221-9.
12. Eastman P: Antihypertensive prescribing. A survey of general practice supervisors and registrars. *AustFamPhys* 2008, 37:969–971.
13. Briganti EM, Shaw JE, Chadban SJ, Zimmet PZ, Welborn TA, McNeil JJ, Atkins RC: Untreated hypertension in Australian adults: the 1999–2000 Australian Diabetes, Obesity and Lifestyle Study (AusDiab). *Med J Aust* 2003, 179:135–139.

14. Reiner Z, Sonicki Z, Tedeschi-Reiner E: Physicians' perception, knowledge and awareness of cardiovascular risk factors and adherence to prevention guidelines: The PERCRO-DOC survey. *Atherosclerosis* 2010, 213:598–603.
15. Erdine S, Redon J, Böhm M, Ferri C, Kolloch R, Kreutz R, et al. Are physicians underestimating the challenges of hypertension management? Results from the Supporting Hypertension Awareness and Research Europe-wide (SHARE) survey. *Eur J Prev Cardiol* 2013; 20:786-92.
16. Redon J, Erdine S, Böhm M, Ferri C, Kolloch R, Kreutz R, et al. Physician attitudes to blood pressure control: Findings from the Supporting Hypertension Awareness and Research Europe-wide survey. *J Hypertens* 2011; 29:1633-40.
17. Yadav RS, Singh P, Askari M, Sinha S, Kumar S, Mehta V. Impact of Covid pandemic and working strategies on private practitioners. *J Pharm BioallSci* 2021;13:S1414-7.
18. Alonge O., Adeol F., Bamidele F., Omotosho T., Aboluwoye, M., Olulana, S., Fashina N., Famuyiwa F., Egunjobi A., & Arinola G. Clinical Outcome of Corona Virus Disease-19 Patients in An Infectious Disease Center, Olodo, Ibadan, Oyo State, Nigeria. *Clinical Medicine Insights*, 2022;3(2), 287–296.