e-ISSN: 0975-1556, p-ISSN:2820-2643

Available online on www.ijpcr.com

International Journal of Pharmaceutical and Clinical Research 2022; 14(8); 108-113

Original Research Article

An Observational Assessment of the Knowledge and Awareness of General Practitioners Concerning the Management of Hypertension

Md. Israrul Haque[1], Md. Farid Alam Ansari[2]

[1]Assistant Professor, Department of General Medicine, Netaji Subhas Medical College and Hospital, Bihta, Patna, Bihar, India

[2]Assistant Professor, Department of General Medicine, Netaji Subhas Medical College and Hospital, Bihta, Patna, Bihar, India

Received: 25-01-2022 / Revised: 20-02-2022 / Accepted: 10-03-2022
Corresponding author: Dr. MD. Farid Alam Ansari
Conflict of interest: Nil

Abstract

Aim: To assess awareness and approach of general practitioners towards hypertension management.

Methodology: The present study was conducted in Department of General Medicine, Netaji Subhas medical College and Hospital, Bihta, Patna, Bihar, India for 1 year, among 100 general practitioners who agreed to participate in the study. All were enrolled after obtaining their written consent. Data pertaining to subjects such as name, age, gender etc. was recorded. A detailed questionnaire was prepared which comprised of information regarding the technique of measurement of blood pressure, diagnosis of pre-hypertension and hypertension, evaluations of newly diagnosed hypertensive patients, the role of non-pharmacological measures to treat prehypertension and hypertension, level of blood pressure to start pharmacological treatment and selection of antihypertensive agents in different clinical conditions. Each participant was personally visited and questionnaire was filled accordingly. The questionnaire was thoroughly checked after being filled for any leftovers. Results thus obtained were subjected to statistical analysis.

Results: Out of 100 subjects, males were 53 and females were 47. Cuff placement covering 2/3 of the arm at heart level was recommended by 80%, preferred position of patient was sitting replied by 48%, supine by 35% and standing and supine by 17%. The number of readings of blood pressure was 1 by 5%, 2 by 43% and 3 by 52%. The difference was significant ($P< 0.05$). Investigation preferred by general practitioners were ECG by 89%, urine examination by 63%, serum creatinine by 78%, lipid profile by 84%, ultrasound of abdomen by 39%, serum potassium level by 66% and RBS by 94%. Common symptoms reported were morning headache by 67%, dizziness by 49%, palpitation by 48%, easy fatigability by 55% and impotence by 50%.

Conclusion: It can be concluded after this study that most of the general practitioners are well aware and updated about the initial lab investigations, symptoms and techniques.

Keywords: Practitioners, hypertension, investigations.

Introduction

Hypertension is a common chronic disease worldwide and a major risk factor for cardiovascular disease. The silent killer, hypertension (HTN), is a significant risk factor for cardiovascular disease. In the developing countries, the problem is compounded by very poor and healthcare coverage, late diagnosis, and affordability of qualitative healthcare. 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 [1]; and of course physicians inertia [2, 3] which may have its root in lack of familiarity with existing practice guidelines. The poverty of healthcare resources and low doctor to patient ratio in this region of practice may stretch the medical facilities and practitioners leading to very little time or resources to spare for continuing professional development.

In South Asia, high blood pressure (BP) is the third most important risk factor for disease attributable burden (2010). In India, HTN has a major public health effect on cardiovascular health and health-care systems. In India, HTN is directly responsible for 57% of all stroke deaths and 24% of all coronary heart disease deaths. HTN is one of the leading causes of death in the world, according to the WHO [4-6]. According to a study of global data on the global burden of HTN in 2005, 20.6% of Indian men and 20.9% of Indian women had HTN. By 2025, Indian men and women's HTN rates are expected to rise to 22.9% and 23.6%, respectively [6, 7]. According to the WHO figures from 2008, 32.5% of Indians had high BP (33.2% in men and 31.7% in women) [8].

Primary care physicians play a critical role in the national health system as the first point of contact for patients, their families, and the community. In India, general practitioners (GPs) offer comprehensive primary health care to people of all ages and are the health system's first point of contact. The attitudes of doctors toward recommendations have a big impact on how they are implemented in clinical practice. Doctors' intentions to use guidelines can be predicted based on their attitudes toward them, which are affected by a number of factors including their awareness, prior clinical experience, views about guidelines, outcome expectations, peer perceptions, and the features of the guidelines [9].

The literature review revealed several weaknesses in previous research regarding the evaluation of doctors' adherence to hypertension guidelines. As hypertension occurs in isolation in less than 20% of cases and is almost always accompanied by other risk factors, addressing comorbidities is an important consideration while measuring doctors' adherence to hypertension guidelines. Some of the studies which had evaluated doctors prescribing practices against the guidelines failed to address comorbidities [10]. Adhering to goals and recommendations has the potential of contributing substantially to decreasing the national health and financial burden [11]. The present study was conducted to assess awareness and approach towards hypertension management

Materials and Methods

The present study was conducted in Department of General Medicine, Netaji Subhas medical College and Hospital, Bihta, Patna, Bihar, India for 1 year, among 100 general practitioners who agreed to participate in the study. All were enrolled after obtaining their written consent. Data pertaining to subjects such as name, age, gender etc. was recorded.

A detailed questionnaire was prepared which comprised of information regarding the technique of measurement of blood pressure, diagnosis of pre-hypertension

and hypertension, evaluations of newly diagnosed hypertensive patients, the role of non-pharmacological measures to treat prehypertension and hypertension, level of blood pressure to start pharmacological treatment and selection of antihypertensive agents in different clinical conditions.

Each participant was personally visited and questionnaire was filled accordingly. The questionnaire was thoroughly checked after being filled for any leftovers. Results thus obtained were subjected to statistical analysis. A P-value of less than 0.05 was considered significant.

Results:

Table 1: Distribution of subjects

Gender	Male	Female
Number	53	47

Out of 100 subjects, males were 53 and females were 47. Cuff placement covering 2/3 of the arm at heart level was recommended by 80%, preferred position of patient was sitting replied by 48%, supine by 35% and standing and supine by 17%. The number of readings of blood pressure was 1 by 5%, 2 by 43% and 3 by 52%. The difference was significant (P< 0.05).

Table 2: Technique of blood pressure measurement

Technique	Method	Percentage	P-value
Cuff placement	Covering 2/3 of the arm at heart level	80%	-
The preferred position	Sitting	48%	0.019
	Supine	35%	
	Standing and supine	17%	
No. of readings of blood	1	5%	<0.05
	2	43%	
	3	52%	

Investigation preferred by general practitioners were ECG by 89%, urine examination by 63%, serum creatinine by 78%, lipid profile by 84%, ultrasound of abdomen by 39%, serum potassium level by 66% and RBS by 94%. Common symptoms reported were morning headache by 67%, dizziness by 49%, palpitation by 48%, easy fatigability by 55% and impotence by 50%.

Table 3: Investigations for newly diagnosed hypertensive patients

Investigations	Percentage
ECG	89%
Urine examination	63%
Serum creatinine	78%
Lipid profile	84%
Ultrasound of Abdomen	39%
Serum potassium level	66%
RBS	94%

Table 4: Assessment of symptoms

Symptoms	Percentage
Morning Headache	67%
Dizziness	49%

Palpitation	48%
Easy fatigability	55%
Impotence	50%

Discussion:

Some of the studies which had evaluated doctors prescribing practices against the guidelines failed to address comorbidities excluded comorbidities or included only one comorbidity, while some failed to define explicit criteria for defining guidelines adherence [12]. The majority of these studies had not conducted a review of the patient's medical record to find whether divergence from guidelines was justifiable or not. The studies which had used survey data as a tool for measuring adherence with guidelines had the major limitation of reliance on self-reported practices, which are always subject to bias [13]. Doctors' attitudes towards guidelines play a significant role in their implementation in clinical practice. Doctors' intentions to use guidelines can be predicted from their attitudes towards guidelines, which are influenced by many factors, such as their knowledge, past clinical experience, beliefs about guidelines, outcome expectations, peers' opinions, and guidelines characteristics [14].

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 [15]. A hospital-based study documented a better rate of control of 35.8% in subjects with hypertension receiving care in a tertiary care facility [16]. In a hospital-based study in Nigeria, it was shown that evidence of target organ damage was present at the time of first documented diagnosis of hypertension [17].

While ignorance, accessibly and affordability of medical care may be contributory, it is also likely that some of these people have actually had previous contacts with medical facilities. Previous studies have shown that compliance with antihypertensive medication is very poor among subjects suffering from hypertension and this is coupled with extensive use of complementary and alternate medications [18]. 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 [19].

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 [20]. Recently, a study in Dakar corroborated the high incidence of hypertension in native Africans especially in the older adults, 50 years and over. Only about half of the subjects with high BP were aware of their blood pressure status and of the 70% on treatment, the control rate was an appalling 17% [21].

Deshpande et al [22] conducted a cross-sectional survey in 80 general practitioners (GPs) of the western part of Vadodara city with the use of a questionnaire prepared from JNC-7 guidelines and standard medical books. Seventy-seven [97.55%] GPs completed the questionnaire and their responses were statistically analysed in which twenty percent of GPs were not applying BP cuff properly for BP measurement. Only 18% and 16.6 % could diagnose isolated diastolic hypertension (IDH) and isolated systolic hypertension respectively (ISH) and 21% and 29% would have considered the treatment of IDH and ISH respectively. 48% consider treating pre-hypertension using non-pharmacological measures. [23]

Conclusion:

This research provides insight into the understanding of recent recommendations and developments for the treatment of hypertension by general practitioners which can be used in the future to achieve better management at the primary health-care level. It can be concluded after this study that most of the general practitioners are well aware and updated about the initial lab investigations, symptoms and techniques.

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