Original Article

Assessment of Awareness and Approach Towards Hypertension Management Among General Practitioners

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Abstract

Background: Hypertension and its complications are a global concern, due to its high prevalence especially as it often remains undiagnosed. The present study was conducted to assess awareness and approach towards hypertension management among general practitioners. **Subjects & Methods:** 150 general practitioners were questioned regarding the technique of measurement of blood pressure, diagnosis of prehypertension and hypertension, evaluations of newly diagnosed hypertensive patients, level of blood pressure to start pharmacological treatment and selection of antihypertensive agents in different clinical conditions. **Results:** Out of 150 subjects, males were 80 and females were 70. Cuff placement covering 2/3 of the arm at heart level was recommended by 84%, preferred position of patient was sitting replied by 52%, supine by 32% and standing and supine by 16%. The number of readings of blood pressure was 1 by 2%, 2 by 40% and 3 by 58%. Investigation preferred by GP was ECG by 91%, urine examination by 68%, serum creatinine by 82%, lipid profile by 80%, ultrasound of abdomen by 35%, serum potassium level by 72% and RBS by 98%. Common symptoms reported were morning headache by 70%, dizziness by 45%, palpitation by 52%, easy fatigability by 57% and impotence by 48%. The difference was significant ($P < 0.05$). **Conclusion:** Most of the GPs are well aware and updated about the initial lab investigations, symptoms and techniques.

Keywords: Awareness, Blood pressure, Hypertension

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Introduction

Hypertension and its complications are a global concern, due to its high prevalence especially as it often remains undiagnosed. [1] In India, the prevalence of hypertension in the last six decades has increased from 2% to 25% among urban residents and from 2% to 15% among the rural residents. High blood pressure is an important risk factor for cardiovascular disease and causes 7.5 million deaths per year (12.8% of all deaths) annually. [2] The global burden of disease study suggests that systolic blood pressure is accountable for the highest proportion of lost years of life due to premature death, with 212 million years lost. The high blood pressure rank in the world increased from the fourth in 1990 to the second in men and first in women in 2017. The prevalence of hypertension (HTN) in various regions of the world has been reported from 4 to 78%. In the Eastern Mediterranean region, it is on average 29.5% and in Iran 22%. [3]

Primary care physicians play an extremely important role as the first level of contact for individuals, screening family as well as the community in the national health system. 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. [4]

Studies have shown that across the globe the awareness and adherence of general practitioners and primary care physicians especially with regards to guidelines may have certain lacunae. Adhering to goals and recommendations has the potential of contributing substantially to decreasing the national health and financial burden. [5] The present study was conducted to assess awareness and approach towards hypertension management

among general practitioners.

Subjects and Methods

The present study was conducted among 150 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 questionnaire was prepared which comprised of information regarding the technique of measurement of blood pressure, diagnosis of prehypertension 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. 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

Total- 150		
Gender	Males	Females
Number	80	70

[Table 1] shows that out of 150 subjects, males were 80 and females were 70.

[Table 2] shows that cuff placement covering 2/3 of the arm at heart level was recommended by 84%, preferred position of patient was sitting replied by 52%, supine by 32% and standing and supine by 16%. The number of readings of blood pressure was 1 by 2%, 2 by 40% and 3 by 58%. The difference was significant (P< 0.05).

[Table 3, Figure 1] shows that investigation preferred by GP were ECG by 91%, urine examination by 68%, serum creatinine by 82%, lipid profile by 80%, ultrasound of abdomen by 35%, serum potassium level by 72% and RBS by 98%. The difference was significant (P< 0.05).

[Table 4] shows that common symptoms reported were morning headache by 70%, dizziness by 45%, palpitation by 52%, easy fatigability by 57% and impotence by 48%. The difference was significant (P< 0.05).

Discussion

The literature review revealed several weaknesses in previous research regarding evaluation of doctors' adherence to hypertension guidelines.[6] As hypertension occurs in isolation in
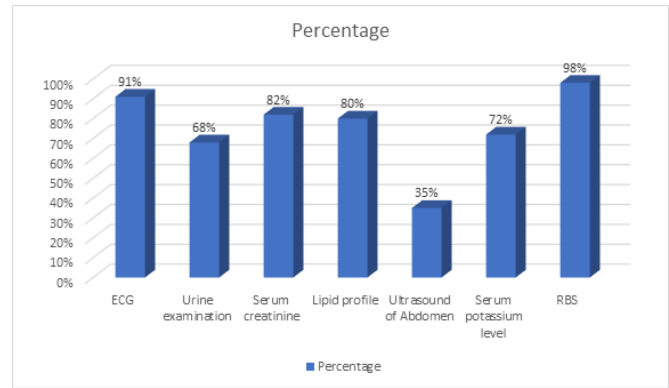

Figure 1: Investigations for newly diagnosed hypertensive patients

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.[7] 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.[8] 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.[9] 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.[10] The present study was conducted to assess awareness and approach towards hypertension management among general practitioners.

In present study, out of 150 subjects, males were 80 and females were 70. We found that cuff placement covering 2/3 of the arm at heart level was recommended by 84%, the preferred position of patient was sitting replied by 52%, supine by 32% and standing and supine by 16%. Number of readings of blood pressure was 1 by 2%, 2 by 40% and 3 by 58%. Mirzaei et al,[11] estimated awareness, treated and controlled hypertensive and relevant predictors in an adult Iranian population. Blood pressure was measured three-time with standard protocol by trained health workers. Those with a positive history of hypertension and using anti-hypertensive drugs, prescribed by a physician, were considered hypertensive. Hypertension was defined as systolic

Table 2: Technique of blood pressure measurement

Technique	Method	Percentage	P-value
Cuff placement	Covering 2/3 of the arm at heart level	84%	-
The preferred position of	Sitting	52%	0.02
	Supine	32%	
	Standing and supine	16%	
No. of readings of blood	1	2%	0.05
	2	40%	
	3	58%	

Table 3: Investigations for newly diagnosed hypertensive patients

Investigations	Percentage	P-value
ECG	91%	0.91
Urine examination	68%	
Serum creatinine	82%	
Lipid profile	80%	
Ultrasound of Abdomen	35%	
Serum potassium level	72%	
RBS	98%	

Table 4: Assessment of symptoms

Symptoms	Percentage	P-value
Morning Headache	70%	0.82
Dizziness	45%	
Palpitation	52%	
Easy fatigability	57%	
Impotence	48%	

blood pressure $\geq$ 140 mmHg and/or diastolic BP of $\geq$90 mmHg. Uncontrolled hypertension was defined in accordance with recommended treatment targets by the Joint National Committee (JNC7). Logistic regression was used to assess the predictors of hypertension awareness, treatment and control. The prevalence of hypertension was 37.3%, and the prevalence of pre-hypertension was 46.4%. 49.7% of People with hypertension were aware of their disease, and 71.5% of them were using antihypertensive drugs prescribed by physicians. Blood pressure was controlled in 38.9% of the treated patients. In the adjusted model, older age, female sex, and history of diabetes mellitus were positively associated with higher awareness. High physical activity, tobacco smoking, and diabetes are the only predictors of treated high blood pressure. Younger age, female sex, and higher education were determinants of controlled hypertension. Having health insurance was significantly correlated with awareness and control of hypertension.

We found that investigation preferred by GP were ECG by 91%, urine examination by 68%, serum creatinine by 82%, lipid profile by 80%, ultrasound of abdomen by 35%, serum potassium level by 72% and RBS by 98%. We found that common symptoms reported were morning headache by 70%, dizziness by 45%, palpitation by 52%, easy fatigability by 57% and impotence by 48%. Deshpande et al,[12] 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. Results: 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. Only 21% use thiazide diuretics for uncomplicated

HTN and 50% use beta-blockers in coronary artery disease patients.

The limitation of the study is the small sample size.

Conclusion

The authors found that most of the GPs are well aware and updated about the initial lab investigations, symptoms and techniques.

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