



General Medicine

ARE PEOPLE AWARE OF HYPERTENSION, IS HYPERTENSION IS CONTROLLED ADEQUATELY AND POSITIVE FAMILY HISTORY IN HYPERTENSIVE PATIENTS: A SCREENING STUDY CARRIED OUT ON WORLD HYPERTENSION DAY.

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ABSTRACT

Introduction: Now a days non-communicable diseases like Hypertension are on high rise, Indian studies support this. HTN produces significant public health burden. Majority of hypertensive patients are asymptomatic and accidentally detected on routine check up or after its complications, so it becomes necessary to detect and control before it causes target organ damage. India is large country with heterogeneous and young population. Community survey in different parts with different ethnic groups are important to detect hypertension. We conducted community screening on World Hypertension Day (17th May 2015) to detect and make awareness of hypertension at karad tahasil in maharashtra.

Aims and Objectives: To carry out community screening on occasion of world Hypertension to detect, to see awareness and control state and association of family history in hypertensive individuals.

Material and Method: People voluntarily visiting our 2 pandals to get their blood pressure checked were included. BP was measured with mercury sphygmomanometer (calibrated) of diamond company in sitting position with feet touching the ground. BP was measured twice with interval of 2 minutes, As per recommendations in the Report of a WHO Expert Committee. BP was staged according to JNC-VII (Joint National Committee) criteria.

Results: Out of 765 individuals 400 (52.28%) were having normal BP, Stage I hypertension was seen in 16.86% individuals and stage II was seen in 7.45% individuals. In both hypertensive and pre-hypertensive group family history was significantly positive 57.89% and 64% respectively.

Conclusion: Blood pressure measurement at given opportunity is judicious and justified, it should be detected early to prevent complications. We also see that around 1 out of 4 individuals are in pre-hypertensive group and they are young. Given the low level of awareness we health care physicians should spread awareness of hypertension in our society

KEYWORDS : Hypertension, Pre-Hypertension, Family History**INTRODUCTION**

India is developing country, due to demographic shift the elderly population is increasing in developing countries all over the globe along with increase in life expectancy. It has been estimated that majority of elderly population will reside in developing countries by 2025(1,2). Now a days non-communicable diseases are on high rise so developing countries are likely to face large burden of such diseases. Hypertension one of common non-communicable disease, important fact that it is modifiable risk factor for morbidity and mortality in the population(3). Studies from india have shown rise in prevalence of hypertension(4). Hypertension (HTN) is 3rd main important risk factor to contribute disease burden in South Asia(5). HTN creates significant public health burden on health care system of india and cardiovascular health(6,7). According to WHO HTN is most important cause of premature death in the world (8). Hypertension causes 57% of all stroke deaths and of all coronary heart disease (CHD) in India(9). According to WHO 2008 estimated prevalence in india is 32.5%. A large number of randomized control trials have shown that control of hypertension reduces cardiovascular morbidity and mortality(10,11,12,13)

Majority of hypertensive patients are asymptomatic and accidentally detected on routine check up. Many can be detected to be hypertensive after complications, so it becomes necessary to detect and control before it causes target organ damage. India is large country with heterogeneous and young population. Community survey in different parts with different ethnic groups are important to detect hypertension or pre-hypertension to face the rising trend of this non-communicable disease. If our society is screened for hypertension it will help to detect and also make them aware of hypertension which will help to reduce the hypertension related complications in their future life. This community screening was conducted on World Hypertension Day (17th May 2015) to detect and make awareness of hypertension at karad tahasil in maharashtra.

AIMS AND OBJECTIVE

This observational study was carried out on world hypertension day 15th May to -2016

1. Screen the people of karad tahasil on occasion of world hypertension day
2. Carry out free blood pressure check as part of service to our society
3. Spread awareness of hypertension in the people
4. See the incidence of hypertension in the people examined on that day as part of survey

5. Guide the people who are in pre-hypertensive
6. See insight of blood pressure in already diagnosed hypertensive individuals
7. Correlate association of hypertension with family history

MATERIAL AND METHODS

This observational study was carried out on 15th May world hypertension day in karad tahasil place in western Maharashtra. On that Day we put two pandals, one in front of central bus station and another on main road of town. These places were selected as maximum people walk on this route. The banner mentioning free blood pressure (BP) check up was displayed. People voluntarily visited counters. A questionnaire was designed with following points

1. Are you willing to get your blood pressure checked?
2. Have you checked your BP previously?
3. Are you aware of the condition high blood pressure?
4. Are you known hypertensive?
5. Do you take any medication especially antihypertensive regularly?
6. Is there family history of hypertension.
7. Is there any renal disease at present?

A team of 10 doctors conducted study from 7am to 6pm. These doctors were resident medical officers (RMO) with experience of 5yrs in hospital as RMO and supervised by physician. All participants were given 5 minutes rest in sitting position, during this time questionnaire was completed. After getting consent of individuals BP was measured with mercury sphygmomanometer (calibrated) of diamond company in sitting position with feet touching the ground. BP was measured twice with interval of 2 minutes. As per recommendations in the Report of a WHO Expert Committee on Hypertension Control (1996), subjects were sitting with back supported, extra clothing on arm was either removed or rolled up. Arm was taken at the level of heart with support at elbow. It was also assured that muscles of arm are relaxed and cuff is evenly applied to upper arm.

BP was staged according to JNC-VII (Joint National Committee) criteria.. As per JNC VII BP was labelled as

Blood pressure Classification	SBP mm MG	DBP mm HG
Normal	< 120	< 80
Pre-hypertension	120-139	Or 80-90
Stage I hypertension	140-159	Or 90-99
Stage II hypertension	> 160	>100

SBP, systolic blood pressure; DBP, diastolic blood pressure

Inclusion criteria-

- All the individuals above age of 18 years
- who voluntarily involved in the study

Exclusion criteria-

- Age below 18 years
- Patients with history of renal disease and/or on dialysis are excluded
- Individuals not willing to participate

RESULTS

Total 765 subjects above age of 18 years were screened. Demographic profile of study population is given in table 1. From study group 643 subjects were male and 122 were female. Out of 765 individuals 400 (52.28%) were having normal BP. Stage I hypertension was seen in 16.86% individuals and stage II was seen in 7.45% individuals. Prehypertensive group had 175(22.88%) individuals.

From studied population 27.89% were aware of their hypertension.

Table 1. Demographic profile of study population

Total individuals	765
Male	643 (84%)
Female	122 (16%)
Normal B.P.	400 (52.28%)
Prehypertensive	175 (22.88%)
Hypertensive (Stage I+II)	190 (24.83)
Stage I Hypertension	129 (67.36%)
Stage II Hypertension	57 (32.63%)
Aware of Hypertension	213 (27.89%)change

Maximum no of individuals were in age group 18-30 year and minimum in age above 75 years. Age wise distribution is shown in table no.2.

Table 2. Distribution according to age, hypertension, pre-hypertension.

Age- yrs	Total	Normal BP	Hypertensive			Prehypertensive
			Total	StageI	StageII	
All	765	400	190	128	62	175
18-30	203	158 (77.83%)	15 (7.39%)	11 (67.36%)	4 (36.36%)	30 (14.78%)
30-39	160	93 (58.12%)	32 (20%)	25 (78.12%)	7 (21.88%)	35 (21.88%)
40-49	183	80 (43.71%)	52 (28.41%)	38 (73.07%)	14 (26.93%)	51 (27.86%)
50-59	131	41 (31.30%)	45 (34.35%)	32 (71.11%)	13 (28.89%)	45 (34.35%)
60-69	61	19 (31.14%)	30 (49.18%)	18 (60%)	12 (40%)	12 (19.67%)
>70	27	9 (33.33%)	16 (59.26%)	4 (25%)	12 (75%)	2 (7.4%)

Below age of 30 years 7.39% individuals had hypertension and gradually increased to about 60% above at age of 70 years. From hypertensive group majority nearly 70% had stage I and 30% had stage II hypertension.

Highest Prehypertension was seen in age group 59 to 60 yrs 34.35% followed by age group of 40-49 (27.86%). No of pre-hypertensives increased up to 5th decade and then declined. 14.78% individuals below age of 30 years were prehypertensive.

Table 3. Association of family history of hypertension

	Total number	Family history	
		Present	Absent
Hypertensive	190	110(57.89%)	80(42.10%)
Prehypertensive	175	112(64%)	63(36%)

In both hypertensive and pre-hypertensive group family history was significantly positive 57.89% and 64% respectively.

DISCUSSION

In developing country like india HTN is common and major health problem(5,6). This is shown by large number of Indian urban and rural studies(8,14-23). Studies between 1969- 2011 has shown the

prevalence of hypertension ranged between 13.9 to 46.3% in urban and 4.5 to 58.8% in rural india(20). Shamal Kumar das et al in 2005 shown high prevalence of prehypertension 35.8 – 47.7% in urban community survey(21).In 1994-95 Gupta et al have shown prevalence of HTN about 21.1 % in rural and 32% in urban india(22,23).

Our screening study shows around 24.83% individuals were hypertensive. The incidence of hypertension increased from 7.39% in age group < 30 years to maximum 59.26% in age group > 70 years of age, means as age advances incidence increases (24,25).

The prevalence of pre-hypertension was significant 22.88%, means 1 out of 4 was in pre-hypertensive group. The incidence increased from 14.78% < 30 years to 34.35% in age group 50-59 years and then decreased to 19.67% in 60-69 years, 7.4% above 70 years. Inverse relationship between prevalence of pre-hypertension and age was shown by Das et al.(26). As pre-hypertensive are more likely to go in hypertensive stage individuals in this group are at high risk to develop cardiovascular disease in absence of other risk factors (27,28).

Our study shows that out of 190 hypertensive 53 (27.89%) were aware of having hypertension which is in range (21.4-29.3%) similar to estimation by R.Anchala et al.(29).

We found that family history was strongly associated with both hypertension and pre-hypertension group which is well documented by Priyanga Ranasinghe et al. (30).

CONCLUSION

There is high no of individuals having hypertension in studied community. As india has high prevalence of hypertension (31), blood pressure measurement in all adults at given opportunity is judicious and justified. Large no of hypertensive people remain undetected and therefore unaware of the risk they are facing. This indicate the need for greater awareness in the general population and also health care physicians. Our strategy should be to diagnose hypertension at early stage and to prevent its long term complications.

We also see that around 1 out of 4 individuals are in pre-hypertensive group, they are young and requires major effort to prevent or at least postpone progression to hypertension and subsequently cardiovascular disease which is major killer in india.

Nearly one fourth population was aware of hypertension, Given the low level of awareness we health care physicians should spread awareness of hypertension in our society, This will compliment overall efforts to increase societal awareness, as World Hypertension League (WHL) aiming to improve public awareness through World Hypertension Day, conducted on May 17th every year.

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