



PREVALENCE AND ASSOCIATED RISK FACTORS OF HYPERTENSION

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ABSTRACT

Hypertension is major public health problem and important area of research due to its high prevalence and being major risk factor for cardiovascular diseases and other complications, the present study showed age as one of the significant risk factors for prevalence of hypertension. For the observation that the prevalence of hypertension was higher in alcohol intake, tobacco smoking or chewing participants and sedentary life style one of the risk factor for hypertension. **Materials And Methods:** the study was carried out in department of general medicine at konaseema institute of medical sciences and research foundation, amalapuram. For two months (january & february 2025). 103 sampled collected on the basis of a questionnaire and results were analysed. **Results:** Responses from 103 subjects were utilised for the analysis in the current study. The general characteristics of the subjects are shown in (Table 1). Most of the subjects were females (50.5%), 20-40 years old (57.3%), with normal BMI [18.5 24.9] (61.2%), with history of practice of physical exercises (70.9%), with no previous history of hypertension (66.0%), with no history of smoking (89.3%), with no history of drinking (84.5%). **Conclusion:** The study showed that majority of the subjects were aware about the risk factors of hypertension and are taking the necessary preventive measures like weight reduction, reducing dietary sodium intake, adopting DASH eating plan and regular monitoring and tracking of blood pressure. Subjects diagnosed with high blood pressure are using Anti hypertensive medications, whereas some percentage of patients lack the knowledge of associated risk factors of smoking and alcohol consumption, lack of physical exercise, and associated comorbidities

KEYWORDS : Cardiovascular Diseases, Peripheral Vascular Diseases, Hypertension, Sedentary Life Style

INTRODUCTION:

Hypertension is a major public health problem and important area of research due to its high prevalence and being major risk factor for cardiovascular diseases and other complications. The present study showed, age as one of the significant risk factors for prevalence of hypertension. Further observations revealed that, the prevalence of hypertension was higher in alcohol-intake, tobacco-smoking/chewing participants and sedentary life style is also one of significant risk factor for hypertension. Around 7.5 million deaths or 12.8% of the total of all annual deaths worldwide occur due to high blood pressure. It is predicted to be increased to 1.56 billion adults with hypertension in 2025. Raised blood pressure is a major risk factor for chronic heart disease, stroke, and coronary heart disease.

Elevated BP is positively correlated to the risk of stroke and coronary heart disease. Other than coronary heart disease and stroke, its complications include heart failure, peripheral vascular disease, renal impairment, retinal hemorrhage, and visual impairment. Hypertension (or HTN) or high blood pressure is defined as abnormally high arterial blood pressure.

According to the Joint National Committee 7 (JNC7), normal blood pressure is a systolic BP < 120 mmHg and diastolic BP < 80 mm Hg. Hypertension is defined as systolic BP level of > 140 mmHg and/or diastolic BP level > 90 mmHg. The grey area falling between 120-139 mmHg systolic BP and 80-89 mmHg diastolic BP is defined as "prehypertension". Although prehypertension is not a medical condition in itself, prehypertensive subjects are at more risk of developing hypertension.

It is a silent killer as very rarely any symptom can be seen in its early stages until a severe medical crisis takes place like heart attack, stroke, or chronic kidney disease. Since people are unaware of excessive blood pressure, it is only through measurements that detection can be done. Although majority of patients with hypertension remain asymptomatic, some people with hypertension report headaches, lightheadedness, vertigo, altered vision, or fainting episode.

There are several factors predisposing to hypertension. These factors vary from country to country and even there is difference between urban and rural regions of the same place. Rapid urbanization, increasing elderly population, mechanization, sedentary life, and dietary changes act together as a web of risk factors which entangles people in it and leads to several chronic diseases. In order to take effective prevention measures, identification of the risk factors is an essential prerequisite.

This study intends to generate information on prevalence of hypertension and their associated risk factors in rural areas of AMALAPURAM. In addition, it will also look into awareness and control of hypertension among the study subjects (1).

Aim :

To assess the prevalence of HYPERTENSION and associated risk factors in an individual and in a community.

Objectives :

1. To assess the prevalence of HYPERTENSION and associated risk factors.
2. To explore the association between demographic study factors (age; gender; life style modifications.)

Review Of Related Literature :

Shikha Singh, Ravi Shankar, Gyan Prakash Singh conducted a community based cross-sectional study with multistage sampling design conducted among urban population of Varanasi. A modified WHO STEPS interview schedule on 640 study subjects aged 25-64 years was used. The prevalence of hypertension was 32.9% (male: 40.9%, female: 26.0%). Mean systolic and diastolic BP were 124.25 ± 15.05 mmHg and 83.45 ± 9.49 mmHg, respectively. Higher odds of being hypertensive were found in male subjects, eldest age group, married subjects, subjects of upper socioeconomic status, illiterate subjects, and retired subjects. Tobacco and alcohol consumption, overweight, obesity, and abdominal obesity were also associated with hypertension. Out of the total hypertensive 211 subjects, only 81 (38.4%) were aware about their hypertension status; out of those, 57 (70.4%) were seeking treatment and 20 (35.08%) had their blood pressure adequately controlled. Around one-third of the subjects were hypertensive and half of the study subjects were prehypertensive in this area. The awareness, treatment, and control of high blood pressure were also very low.(2)

Mahantesh M. Kurjogi, Gulamnabi L. Vanti, Ram S. Kaulgud conducted a cross sectional study among 9754 participants, out of which 6403 were found to be associated with hypertension. Among 6403 participants, 27.75% were newly diagnosed with hypertension during examination. The present study showed, age as one of the significant risk factors for prevalence of hypertension. Further observations revealed that, the prevalence of hypertension was higher in alcohol-intake, tobacco-smoking/chewing participants and sedentary life style is also one of significant risk factor for hypertension. Overall increased rate of hypertension pose a biggest challenge for health sector in Dharwad district.(3)

Soumitra Ghosh, Manish Kumar conducted a cross-sectional survey data from the fourth round (2015–2016) of National Family Health Survey (NFHS). NFHS was conducted between January 2015 and December 2016, gathering information on a range of indicators including blood pressure. The age-adjusted prevalence of hypertension in India was 11.3% (95% CI 11.16% to 11.43%) among persons aged between 15 and 49 and was four percentage points higher among males 13.8% (95% CI 13.46% to 14.19%) than among females 10.9% (95% CI 10.79% to 11.06%). Persons in the urban location (12.5%, 95% CI 12.25% to 12.80%) had a marginally higher prevalence than persons in rural location (10.6%, 95% CI 10.50% to 10.78%). The proportion of population suffering from hypertension varied greatly between states, with a prevalence of 8.2% (95% CI 7.58% to 8.85%) in Kerala to 20.3% (95% CI 18.81% to 21.77%) in Sikkim. Advancing age, obesity/overweight, male sex, socioeconomic status and consumption of alcohol were found to be the major predictors of hypertension.(4)

Murarkar, Sujata; Pokale, Aarati; Gothankar, Jayashree; Deshmukh, Rupeshkumar; Gupta, Vidit conducted a community- based cross-sectional study to estimate the prevalence of hypertension in urban slums and to evaluate the association of hypertension with various modifiable and nonmodifiable risk factors. Data were collected by house-to-house visits in the slums. Of the 534 participants, 71.91% were female. The prevalence of hypertension was found to be 15.36%. The risk of hypertension increased with age >50 years, female gender, and habits such as tobacco and alcohol. Awareness programs to reduce modifiable risk factors such as smoking and alcohol, promoting healthy lifestyles, as well as early diagnosis and treatment, will benefit the community.(5).

MATERIALS AND METHODS

Place Of Study: The study was carried out in department of general medicine at konaseema institute of medical sciences and research foundation, amalapuram, andhra pradesh, india

Study Design: This was a cross sectional study done in primary health centre and community health centre

Study Participants: People more than 20 years of age

Study Setting: Out patients of PHC Ambajipeta, CHC PGannavaram, PHC Mummidivaram, PHC EWS colony

Sample Size: 103 subjects > 20 years of age

Inclusion Criteria: Subjects > 20 years of age

Exclusion Criteria: Subjects < 20 years of age, patients not willing to give consent, psychiatric patients, unconscious Patients

Data Collection Procedure: After getting informed consent from the participants data was collected in a face to face interview using a pre designed, semi structured questionnaire

Confidentiality: Particulars and details of all the participants were kept confidential throughout the study; only summary of the details was used for declaring the result

Ethical Consideration: Institutional ethics committee approval will be going to taken and informed consent was Taken

Data Analysis And Interpretation: Data was entered using Microsoft Excel sheet. Summarisation and analysis of data was carried out by using IBM SPSS Software version 20(licensed

RESULTS :

Responses from 103 subjects were utilised for the analysis in the current study.

Analysis Of Awareness Based On Risk Factors

Hypertension status	Male	Female	Total	Chi square	P value
Hypertensive	22(21.3%)	13(12.62%)	35(33.98%)	3.77	0.05
Non hypertensive	29(28.15%)	39(37.8%)	68(66.019%)		
Total:103	51(49.5%)	52(50.4%)	103(100%)		
Socioeconomic status	Hypertensive	Non hypertensive	Total	Chi square	P value
Upper class	0(0%)	1(0.97%)	1(0.97%)	9.67	0.02
Upper middle class	11(10.6%)	37(35.9%)	48(46.6%)		
Lower middle class	18(17.4%)	28(27.1%)	46(44.6%)		
Lower class	6(5.82%)	2(1.94%)	8(7.76%)		
Total	35(33.98%)	68(66.0%)	103(100%)		
BMI	Hypertensive	Non hypertensive	Total	Chi square	P value
Under weight	2(1.94%)	2(1.94%)	4(3.88%)	3.58	0.309
Normal	17(16.5%)	46(44.6%)	63(61.16%)		
Over weight	12(11.6%)	15(14.56%)	27(26.13%)		
Obese	4(3.88%)	5(4.8%)	9(8.73%)		
Total	35(33.98%)	68(66%)	103(100%)		

Duration of exercise	Hypertensive	Non hypertensive	Total	Chi square	P value
<15min	16(15.53%)	33(32.03%)	49(47.57%)	0.095	0.95
15-30min	16(15.53%)	30(29.12%)	46(44.66%)		
30min	3(2.91%)	5(4.85%)	8(7.76%)		
Total	35(33.98%)	68(66.01%)	103(100%)		

Physical exercise	Hypertensive	Non hypertensive	Total	Chi square	P value
Yes	12(11.65%)	61(59.2%)	73(70.87%)	18.835	0.00001
No	13(12.6%)	7(6.71%)	20(19.4%)		
Total	35(33.9%)	68(66.01%)	103(100%)		

Smoking consumption	Hypertensive	Non hypertensive	Total	Chi square	P value
Yes	9(8.73%)	2(1.94%)	11(10.67%)	12.56	0.0003
No	26(25.24%)	66(64.07%)	92(89.32%)		
Total	35(33.9%)	68(66.01%)	103(100%)		

Alcohol consumption	Hypertensive	Non hypertensive	Total	Chi square	P value
Yes	13(12.6%)	3(2.9%)	16(15.5%)	18.86	0.00001
No	22(21.3%)	65(63.1%)	87(84.4%)		
Total	35(33.9%)	68(66.01%)	103(100%)		

Associated comorbidities	Hypertensive	Non hypertensive	Total	Chi square	P value
Yes	12(11.65%)	6(5.8%)	18(17.4%)	10.38	0.0012
No	23(22.33%)	62(60.1%)	85(82.5%)		
Total	35(33.9%)	68(66.01%)	103(100%)		

Based on the P value there is a significant difference in the level of prevalence and associated risk factors of hypertension.

According to P values patients were aware about risk factors of hypertension and they were taking hypertension medication, whereas some percentage of patients were not aware of smoking and alcohol consumption, lack of exercise, and associated comorbidities.

DISCUSSION

The article provides estimates on prevalence of Hypertension across AMALAPURAM areas India. and examines age, socioeconomic status, smoking, alcohol, physical exercise, in males and. Females of age 20-80 years.

The key findings is that, the prevalence of Hypertension among the population is 33% Data were collected from outpatient who were attending to PHC and CHC at AMALAPURAM area. Out of 103 participants (50. 5%) female, 49.5 % males, the prevalence of Hypertension is 33.99%

Among age (20-80)

Males -27%

Females -12%

On further observation the risk for hypertension in upper middle class 10.6%, lower middle class 17.4%, obese 3.88%

Most of subjects were female 50.5%; 20-40 years old (57.3%) with normal BMI(61.2%) with history of practice of physical exercise (70.9%) with no previous history of hypertension (66.0%), with no history of smoking (89.3%) with no history of drinking (84.5%)

According To Review Literature

1. shikha Singh, Ravishankar, gyan Singh.

According to our study On study subjects 640 prevalence is 32.9%.

Prevalence is 33.9%

Aged 25-64.

Males 21.3% females 12.62

Males 40.9% females 26.0%

2. Mahantesm, kurjogi, gulamnabi, cantina.

Among 6403 participants newly diagnosed is 27.75%.

Newly Diagnosed 21.4%

3. Soumitra ghosh, Manish Kumar Conducted cross sectional study the Prevalence is 11.3% Prevalence is 33.99%

CONCLUSION:

In conclusion, the study showed that majority of the subjects were aware about the risk factors of hypertension and are taking the necessary preventive measures like weight reduction, reducing dietary sodium intake, adopting DASH eating plan and regular monitoring and tracking of blood pressure. Subjects diagnosed with high blood pressure are using Anti hypertensive medications, whereas some percentage of patients lack the knowledge of associated risk factors of smoking and alcohol consumption, lack of physical exercise, and associated comorbidities.

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