

Hypertension – the Silent Killer, Awareness of Risk Factors and Complications in Rohilkhand Region

Anoop Kumar¹, Abhishek Dwivedi², Ankit Kumar Chaturvdi³, Rakesh Kumar⁴

ABSTRACT

Introduction: Hypertension is a major public health problem and an important area of research due to its high prevalence and being a major risk factor for cardiovascular diseases and other complications. The aim of the study is to evaluate awareness of risk factors and complications of hypertension among study subjects.

Material and Methods: A cross-sectional study was conducted among 280 hypertensive patients out of 480 suspected patients coming to medicine OPD.

Result: Out of 280 patients, majority patient's age was less than 55 years i.e 64%. Female constitute majority of study population i.e. 61%. In our study people with BMI more than 25 more prone to hypertension. Majority of patients are illiterate i.e. 68.7%. Majority (89%) are aware that excess salt and lack of exercise constitute major risk for developing hypertension. Majority of patients among hypertensives were aware that they are more prone to heart (66.7%) followed by kidney damage (35.71%), brain damage (34.7%) and others (19%).

Conclusion: Blood pressure is a modifiable risk factor for cardiovascular, kidney diseases and stroke. The awareness regarding hypertension is very poor amongst patients people. Through this study we identified areas of importance that need to be considered by awareness programmes. Masses should be educated on the risk factors, presenting features and complications of hypertension. This is possible through awareness programmes designed by health professionals and the government.

Keywords: Hypertension, Silent Killer, Awareness of Risk Factors and Complications

INTRODUCTION

Hypertension is one of the leading cause of global burden of disease. The incidence of hypertension is increasing every year in India and all over world. Hypertension is the largest and most important risk factor for cardiovascular and cerebrovascular diseases which are leading causes of death around the globe and is growing in prevalence but poorly controlled virtually every where. It is currently the leading risk resulting in considerable death and disability worldwide and accounted for 9.4 million deaths and 7 per cent of disability adjusted life years (DALYs) in 2010.¹

It is predicted that there will be 2013 hypertensive in India by year 2015. 25-30% adults in urban and 15-18% in rural population is suffering from hypertension. Awareness in rural area is 10-11% and urban 25-30%. In India overall prevalence of hypertension is 29.8%. In rural (27.6%) and urban (33.8%). Hypertension awareness, treatment and control status is low, with only half of urban and a quarter of the

rural hypertensive individuals being aware of its presence. It has been seen that only one in five person is on treatment and less than 5% are controlled. Rural location is an important determinant of poor hypertension awareness, treatment and control. Rural location is an important determinant of poor hypertension awareness, treatment and control.

Evidence shows that lowering and controlling blood pressure has health benefits. For instance, 10 mmHg reduction of systolic blood pressure is associated with 22% and 41% reduction in coronary heart disease and stroke, respectively. In the same way prevention of different risk factors of hypertension contributed to reduction in cardiometabolic mortality. Data on prevalence, awareness, risk factors, treatment and control are necessary for planning and implementing health strategies.^{2,3}

This study was conducted to determine prevalence, risk factors, awareness, treatment and control of hypertension in Rohilkhand region.

MATERIAL AND METHODS

This study was carried on patient suspected of hypertension attending the medicine OPD at Rohilkhand Medical College and Hospital. The hypertensive patients, who attended the Department of Medicine during June 2015 to May 2016, were included in the study. Out 480 patients 280 were recruited by a systematic random sampling, after obtaining their consents. The study was approved by the Institutional Ethics Committee. A standardized questionnaire with details pertaining to their sociodemographic profiles, anthropometry.

Complications

Heart- left ventricular hypertrophy /enlargement, heart failure

Brain- stroke, transient ischemic attack, dementia

Kidney – kidney failure

Arteries – atherosclerosis leading to heart attack or myocardial infarction and angina.

Eye – retinopathy

¹Professor, ²Junior Resident, ³Junior Resident, ⁴Junior Resident, Department of Medicine, Rohilkhand Medical College And Hospital, India

Corresponding author: Abhishek Dwivedi, G-Block, Room No-27, Rohilkhand Medical College and Hospital, Bareilly -243006, India

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Age (years)	Year 2000, % population	Year 2005, % population
20-29	8.5	8.5
30-39	14.8	14.9
40-49	24.8	24.9
50-59	32.6	32.7
60-69	39.9	39.9
>70	51	51
Average	28.60	28.65

Table-1: Prevalence of hypertension in adults, India

Modifiable	Non modifiable
High blood pressure	Family history
Cholesterol	Gender
Diabetes	Age
Diet	Race
Being overweight	
Lack of exercise	
Smoking, alcohol intake, stress	

Table-2: Risk factor

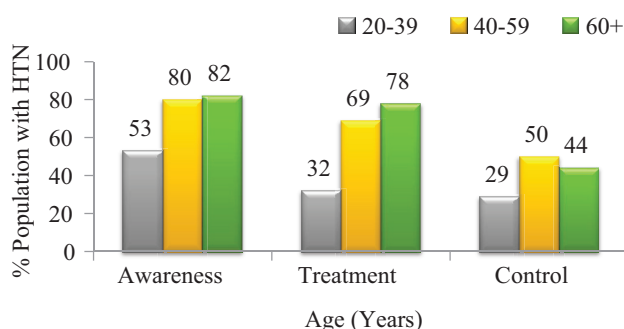


Figure-1: Extent of awareness, treatment and control of high blood pressure by age

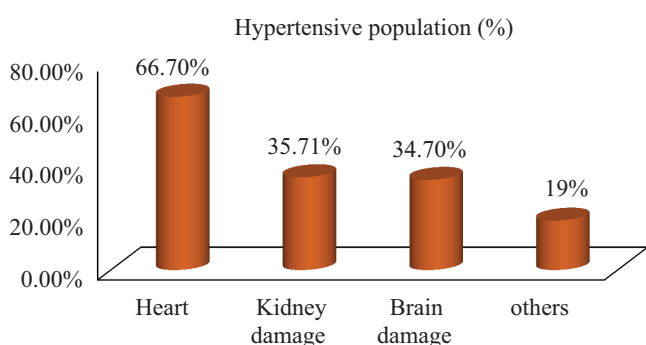


Figure-2: Organs involved in hypertension

RESULTS

Out of 280 patients, majority patient's age was less than 55 years i.e 64% (table-1). Female constitute majority of study population i.e. 61%. In our study people with BMI more than 25 more prone to hypertension. Majority of patients were illiterate i.e. 68.7%. Majority (89%) were aware that excess salt and lack of exercise constitute major risk for developing hypertension. Majority of patients among hypertensives were aware that they are more prone to heart (66.7%) followed by kidney damage (35.71%), brain damage (34.7%) and others

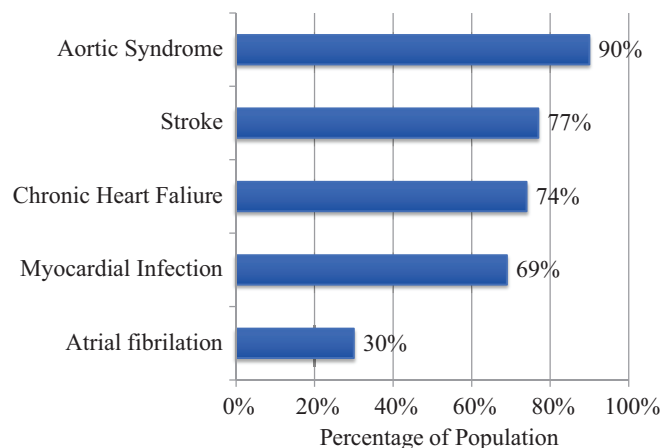


Figure-3: Hypertension – cv risk factors in elderly

(19%) (table-2) (figure-1,2,3). It has been found that in heart diseases aortic syndrome (90%) has maximum risk followed by stroke, chronic heart failure, myocardial infarction and least risk of atrial fibrillation.

DISCUSSION

India is a developing country going through rapid demographic and epidemiological transition. In such transition nutrition plays a key role. This cross sectional study identified a high prevalence of hypertension in females (61%). The reason of high prevalence in females could be stress, obesity and lack of physical activity. The difference of prevalence observed between the present study and other studies^{4,6} with respect to hypertension could be due to social and cultural differences, dietary and lifestyle factors and also the age span as well as research methodology used.

In our study prevalence of hypertension in found higher in age less than 55 years of age which is not consistent with other studies.^{2,6,9,10} The reason for this difference in age based prevalence could be increasing incidence of stress and sedentary life style in young individuals.

Low literacy level was associated with hypertension. The higher education level was negatively correlated to hypertension in present study. We speculate that it could be due to the reason that higher education imparts better knowledge and information about hypertension and subsequently those with higher education had a healthier lifestyle.

The study showed that obesity measured by BMI is a modifiable risk factor to develop hypertension. There was positive relation observed between increasing BMI and increase rate of hypertension, which was consistent with other studies.⁹⁻¹⁴ One of the probable reasons behind this positive relation between obesity and hypertension could be that increased weight increases cardiac output and increases peripheral resistance of arterioles.

Hypertension is a readily treatable risk factor for most common causes of morbidity and mortality in stroke, ischaemic heart disease, renal insufficiency and dementia. It has been suggested that the burden of stroke and ischaemic heart disease may be several times higher in hypertensive subjects in our study. In this study it has been found that

hypertension increases the risk of cardiovascular diseases in elderly population.

CONCLUSION

Current study found that majority of the patients were aware of their condition. The level of awareness in our study was higher when compared with other studies. From the above findings, it can be inferred that there is a gap in hypertension awareness, treatment, and control in the study population inviting urgent public health intervention particularly targeting the population at risk, including younger population.

REFERENCES

1. Lim SS, Vos T, Flaxman AD, Danaei G, Shibuya K, Adair-Rohani H, et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 2013; 380: 2224-60.
2. Das SK, Sanyal K, Basu A. Study of urban community survey in India: growing trend of high prevalence of hypertension in a developing country. *Int J Med Sci* 2005; 2:70-78.
3. Gupta R, Guptha S, Sharma KK, Gupta A, Deedwania P. Regional variations in cardiovascular risk factors in India: India Heart Watch. *World J Cardiol* 2012; 4:112-120.
4. Gupta S, Kapoor S. Sex differences in blood pressure levels and its association with obesity indices: who is at greater risk. *Ethn Dis* 2010; 20:370-37.
5. Goel NK, Kaur P. Dr P. C. Sen Memorial Award – 1994. Role of various risk factors in the epidemiology of hypertension in a rural community of Varanasi district. *Indian J Public Health* 1996; 40:71-76.
6. Chaturvedi S, Pant M, Yadav G. Hypertension in Delhi: prevalence, awareness, treatment and control. *Trop Doct* 2007; 37:142-145.
7. Rani R., Mengi V., Gupta R. K., Sharma H. K. Hypertension and its risk factors—a cross sectional study in an urban population of a North Indian District. *Public Health Research*. 2015;5:67-72.
8. World Health Organization. Geneva, Switzerland: World Health Organization; 2005. WHO STEPS surveillance manual: the WHO STEP wise approach to chronic disease risk factor surveillance.
9. Erem C., Hacıhasanoglu A., Kocak M., Deger O., Topbas M. Prevalence of prehypertension and hypertension and associated risk factors among Turkish adults: trabzon hypertension study. *Journal of Public Health*. 2009;31:47-58.
10. Ahmed A., Rahman M., Hasan R., et al. Hypertension and associated risk factors in some selected rural areas of Bangladesh. *International Journal of Research in Medical Sciences*. 2014;2:p. 925.
11. Mishra C. P., Kumar S. Risk factors of hypertension in a rural area of Varanasi. *Indian Journal of Preventive and Social Medicine*. 2011;42:101-111.
12. Singh R., Sinha R. K., Mani C., Singh R., Pal R. Burden and vulnerability of hypertension in a rural population of Patna, Bihar, India. *South East Asia Journal of Public Health*. 2013;1(1).

13. Dhungana R. R., Pandey A. R., Bista B., Joshi S., Devkota S. Prevalence and associated factors of hypertension: a community-based cross-sectional study in municipalities of Kathmandu, Nepal. *International Journal of Hypertension*. 2016;2016.
14. Costa. Hypertension prevalence and its associated risk factors in adults: a population-based study in Pelotas. *Arq Bras Cardiol*. 2007;88:54-59.

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