

Non- Pharmacological Measures For Control of Hypertension in Geriatric Population

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Abstract

Background: Increased prevalence of hypertension in all over the world is well recognized. Hypertension affects almost all body organs and systems. It can be managed by using non-pharmacological measures as well. **Objective:** To assess knowledge of non-pharmacological measures to control of hypertension and its application in geriatric hypertensive population. **Methods:** The study was conducted in the Department of Physiology, Sumandeep Vidyapeeth University, Vadodara. Total 108 hypertensive patients had been included for this study. Subjects were administered pre tested ten questionnaires. They responded the questionnaires at the same time, without any discussion. **Results:** Knowledge about normal level of blood pressure was lacking in 70% of study population. **Conclusion:** Knowledge about weight reduction, regular exercise, fruits and vegetables intake was poor. About half of the study population said that blood pressure can be controlled by using of drugs only. So, they were not aware of non-pharmacological measures.

Key Words: Hypertension, knowledge, exercise, geriatric, population.

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Introduction

Hypertension is not a chronic disease, but it is independently associated with cardiovascular diseases in the elderly. Although it constitutes one of the most frequent factors for cerebrovascular diseases, it is amendable to modifications¹⁻³ Hypertension (HTN) is a major public health problem in many parts of the world.⁴⁻⁵ It is known as “The silent killer”, it may exist for prolonged periods without symptoms and may manifest only after causing serious complications. It has been identified as the most common, most potent and most universal contributor to cardiovascular mortality, which accounts for 20-50% of all deaths.⁶ It is the first sign of a chronic progressive process

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that may end in serious and potentially fatal complications such as stroke or renal failure and it is a major risk factor of coronary artery disease⁷. Untreated hypertension is usually associated with a progressive rise in blood pressure. The vascular and renal damage this state may culminate in a treatment-resistant state. High blood pressure, or hypertension, forces hearts to work harder when pumping blood into our arteries (blood vessels), which can damage the blood vessels in our brain and lead to a stroke. In other cases, hypertension could contribute to hardening of the arteries (atherosclerosis), which can lead to heart failure. Nobody knows the specific cause of high blood pressure, but contributing factors have included stress, genetics, and smoking, drinking too much alcohol, and consuming too much sodium. In the

world raised blood pressure is estimated to cause 7.5 million deaths, about 12.8% of the total of all annual deaths. Raised blood pressure is a major risk factor for coronary heart disease and haemorrhagic stroke. In some age groups, the risk of cardiovascular disease doubles because it is progressively related to the risk for stroke and coronary heart disease. In addition to coronary heart diseases and stroke, complications of raised blood pressure include heart failure, peripheral vascular disease, renal impairment, retinal hemorrhage and visual impairment. Blood pressure can be controlled not only with drugs but also non-pharmacological management like exercise, weight reduction, salt restriction, eating fruits and vegetables, etc. Non-pharmacological measures play an important role in management of hypertension. The present study was done to assess knowledge of non pharmacological measures to control hypertension and its application in geriatric hypertensive population.

Methods

It is a Cross-sectional, questionnaire based study. 120 subjects more than 50 years of age of either gender with history of hypertension were included and persons not willing to participate and/or not giving consent were excluded from the study. The aim and benefit of this study was explained to the respondents and informed consent was obtained from them. A Questionnaire was prepared consisting of 10 questions in a local language (Gujarati) contain questions to assess knowledge, attitude and practice of the persons about non-pharmacological measures to control hypertension. Answer was given in yes/no or in a single sentenced.

Blood pressure was measured in all the participating subjects by sphygmomanometer (GB120) and stethoscope. Data was analyzed using student's t -tests.

Results

A total of 120 questionnaire were distributed among the persons who were suffering from essential hypertension. Answers to 110 questionnaires were complete and 10 questionnaires were incomplete. The mean ages of the subjects were 56.7 years. Sample consisted of 91 males and 19 females. History of smoking was positive in 90% of the male subject, while history of tobacco consumption was positive in 64% of the male subjects however there were not any positive histories in female subjects. History of antihypertensive drug present in 94 % subject. Blood pressure was higher than normal found at the time of questionnaires administration in 22% of the subjects although they were taking anti hypertensive drug.

Out of 110 people interviewed, 94% said they were suffering from hypertension, 32% were suffering from diabetes mellitus along with hypertension and 2 % were suffering from coronary heart disease with hypertension (Figure 1). Only 11% of the total subjects were aware of the normal values of blood pressure. About 62% of hypertensive subjects used to measure their blood pressure regularly. 94 % of subjects said that blood pressure should be monitored regularly. Only 28% of hypertensive subject said that they have reduced salt intake to control hypertension and so many subjects were not aware whether salt intakes being reduced in patient of hypertension. Only 24% of subjects said that body weight has a co-relation with hypertension. About 76% of hypertensive subject did not know about co-relation between blood pressure and body weight. About 90% of subjects said that walking has important role in control of hypertension and body weight. Only 22% of respondents were aware that pickles and papad contain high content of salt and history of daily consumption of papad, pickles present in 68% subjects. Only 32% of respondents refused fruit consumption due to increased blood glucose level otherwise remaining 68% of

Table I: Knowledge and practice values regarding questions represent in subjects

Type	Follower	Not follower
Knowledge of normal values of blood pressure	11	99
Regular check-up of blood pressure	68	42
Taking anti hypertensive drug	94	16
Restricted salt intake	30	80
Weight reduction	26	84
Fruit consumption	75	35
smoking	82	09
Tobacco consumption	58	33
walking	99	11
Yoga, meditation	03	97

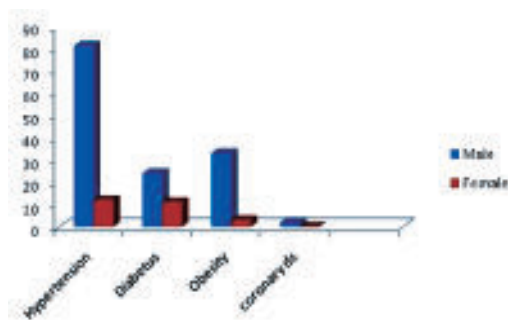


Figure 1: Percentage of male and female suffering from individual disease

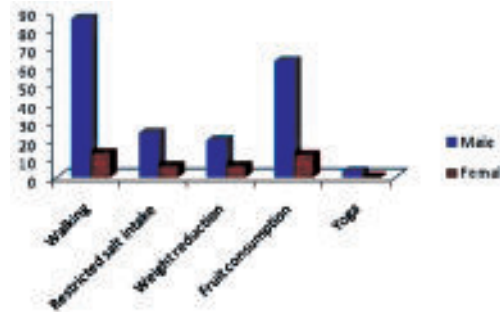


Figure 2: Percentage practice of factors for control of hypertension in both Male and Female

hypertensive said that they take fruits in appropriate amount (Figure.2). Out of all, 74% of the respondents said that smoking and tobacco consumption should be reduced in patient of hypertension. About 92% of all respondents said that blood pressure can be controlled with drugs alone. Only 1% subject has use meditation to control hypertension.

Discussion

There is an increase in the prevalence of hypertension in past few years. Hypertension affects in the body systems and organs. Hypertension can be controlled with drugs along with some non-pharmacological measures. The present study assessed knowledge of non-

pharmacological measures to control hypertension in geriatric patients. About half of the study population was overweight. Family history of hypertension was present in 30 persons. All people spending sedentary life at present time. Half of the population was aware of co-relation between salt intake and blood pressure.⁸⁻¹¹ Majority of population did not know about co-relation between blood pressure and body weight.¹²⁻¹³ The patients should be advised to stop smoking and tobacco consumption. Less salt intake should decrease blood pressure. Diet rich in fruit like bananas and vegetables like unsalted sunflower seeds, spinach, beans, baked white potato, soybeans etc. also helps in reducing blood pressure. Eating about 30 calories a day

dark chocolate should prefer also for reduction of blood pressure without any adverse effect. It is not preferable for overweight people because chocolate is high in calories. Physical activity like daily walking reduces blood pressure and this is also the cause of the reduction in body weight. Impaired baro reflex sensitivity has been increasingly postulated to be one of the major causative factors of essential hypertension. A short period (3 months) of regular yogic practice for 1 hr/day is effective in controlling blood pressure in such individuals.¹⁴

Conclusion

While knowledge and practice regarding body weight, smoking, and tobacco consumption remains satisfactory but regarding salt intake, fruit and vegetables' intake, role of yoga and exercise to correct hypertension remains poor in this study group. But further large scale studies need to be undertaken to know about true picture about knowledge of hypertension in old age persons.

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