

Incidences of hypertension in teachers of JNV University, Jodhpur

RAKA SRIVASTAVA AND KARUNA JAIN

ABSTRACT

The present study was undertaken to find out the incidences and causes of hypertension among the teachers of Jai Narain Vyas University, Jodhpur. A total of 100 teachers comprising of 46 hypertensive and 54 non-hypertensive were randomly selected. Data regarding general and specific information was collected through personal interview. Clinical information of hypertensive subjects was obtained on the basis of assessing lipid profile and blood pressure. It had been found that the incidences of hypertension were high in subjects due to family history, food habits, nibbling between the meals, sleep disorders, depression, and also with dissatisfaction due to promotional scales and working conditions.

KEY WORDS : Hypertension, Body mass index, Food habits

Srivastava, Raka and Jain, Karuna (2010). Incidences of hypertension in teachers of JNV University, Jodhpur, *Adv. Res. J. Soc. Sci.*, 1 (2) : 149-151.

INTRODUCTION

The World Health Organization (WHO) has estimated about 62% cerebrovascular disease and 49% of ischemic heart disease world wide attributable to suboptimal blood pressure levels. High blood pressure estimated 701 million deaths. Overall 26.4% (972 million) of the adult world population was estimated to have hypertension (HTN) in the year 2000, a figure that is projected to increase to 29.2% (1.56 billion) by the 2025. In India, the prevalence of HIN is repeated to increase rapidly in urban areas, the similar trend is spreading gradually to rural areas.

Hypertension has become one of the major causes of disabilities and death in India today. The disease lurks silently in the circulating system and strikes suddenly, afflicts about 60 million Indian. If untreated results in heart attack, stroke and kidney failure or even death. Ironically, of all the known ailments which lead to premature death, hypertension is found to be the earliest form to control the symptoms.

Hypertension sometime coexists with cardio vascular disease (CVD) risk factors, includes obesity, lipid abnormalities, insulin resistance and glucose intolerance. Anti-hypertension therapy has been associated to reduce the incidences about 35% to 40% in stroke incidence, 20% to 25% in myocardial infraction and more than 50% in heart failure in clinical trials. Therefore, management of

hypertension is a critical way of presenting and managing morbidity and mortality from cardio vascular diseases. The present study was committed to find out the incidences and causes of hypertension among the teachers of JNV, University, Jodhpur.

METHODOLOGY

A total sample of hundred teachers within the group of 40 to 50 years were randomly selected for the study, from which 46 were hypertension (range: 140-160 mm Hg/90-105 mm Hg) and 54 were non hypertensive (range: 110-120 mm Hg/75-90 mm Hg). General and specific information was collected using questionnaire with the direct personal interview technique. The information regarding age, sex, age of onset of disease, family history of the disease was obtained through detailed questionnaire. Blood pressure, body mass index and serum cholesterol was examined when the subjects were coming to clinic for their regular checkup. Their dietary information, food habits and activity pattern was also collected.

OBSERVATIONS AND DISCUSSION

The result of the present study revealed of that 46% of the subjects were hypertensive and among these 47.8% were in the age group of below or equal to 50 years, where

Correspondence to:

RAKA SRIVASTAVA, P.G. Department of Home Science, J.N.V. University, JODHPUR (RAJASTHAN) INDIA

Authors' affiliations:

KARUNA JAIN, P.G. Department of Home Science, J.N.V. University, JODHPUR (RAJASTHAN) INDIA

as 52.2% were in the age group of above 50 years. In hypertensive group 24 (52.1%) subjects had detected their hypertension at the age of forties whereas 17 (23.9%) hypertensive teacher's hypertension was detected in thirties, rest 5 (10.8%) and 6 (13.0%) in the age range of twenties and fifties, respectively.

Among hypertensive subjects 30(65.2%) had a family history of hypertension. Signification association was found between family history and incidence of hypertension ($\chi^2 = 48.69, P < 0.05$). In 1999, Shultz *et al.* found that people having a strong family history of hypertension were more at risk than individuals having no family history of hypertension.

Table 1 shows that non-vegetarian (17.3%) and eggetarian (32.6%) subjects were more in hypertensive group as compared to non-hypertensive group. 60.8% hypertensive subjects had a habit of nibbling in between the meals as compared to the non-hypertensive (25.9%). Most of the hypertensive subjects had a habit of taking salty and fatty foods as nibbling in between meals which

Table 1 : Food and nibbling habits among subjects

Food habits	Hypertensive subjects (%) (n = 46)	Non-hypertensive subjects (%) (n = 54)
Vegetarian	50.0	75.9
Non-vegetarian	17.3	12.9
Eggetarian	32.6	11.1
Nibbling habits		
Yes	60.8	25.9
No	39.1	74.1

indicates adding more calorie and salt in the diet of hypertensive subjects (Table 2). 69.5% were very fond of salty and fatty foods like salted butter, chips, nuts, cheese, pickles, papad, sauces etc.

Data regarding the consumption of fibre revealed that majority of the subjects in both the groups were aware of taking dietary fibres in the form of whole wheat flour, whole pulses/pulses with husk, salad, leafy vegetables, and fruits with skin as a precautionary measure. Most of the hypertensive subjects were aware that sprinkling salt is not good for hypertensive patients and this awareness in

people have developed in them the tendency for maintaining their health (Table 2).

It was found that prevalence of grade I obesity was almost similar in both the groups while grade II obesity was higher among hypertensive subjects (17.3%) as compared to non-hypertensive subjects. None of the subjects was in the category of grade III obesity (Fig. 1). In the study of Brown *et al.* (2000), it was found that prevalence of obesity was greatly associated with high blood pressure, which increased BMI for both men and

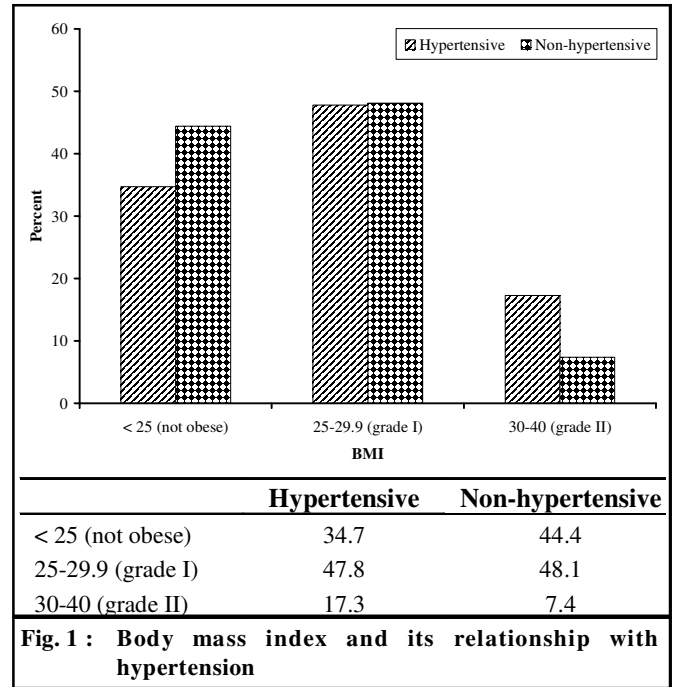


Fig. 1 : Body mass index and its relationship with hypertension

women.

Higher percentage of hypertensive subject (87.04%) were engaged in light to vigorous physical activity as compared to non-hypertensive subjects (80.04%). According to the study conducted by Punsar and Karvonen (2000), hypertension incidence was found low in those who have engaged in high physical activity in their occupation, household and leisure time.

When the level of satisfaction with working conditions was compared, it was found that income and promotional scales that had direct link with hypertension. 56.5% of

Table 2. Consumption of dietary fiber and salty foods among the hypertensive subjects

Dietary fibre				
Whole wheat flour	Salads	Whole pulses/pulses with husk	Fruits with skin	Green leafy vegetables
8.6%	60.8%	93.4%	82.6%	89.1%
Salty and fatty foods				
Salted chips/papad/nuts	Processed cheese/ salted butter	Sauces/pickles	Salt on the table (sprinkling salt)	
43.4%	69.5%	52.1%	28.2%	

Table 3 : Association between depression and hypertension

Subjects	No. depression (%)	At times (%)	Occasionally (%)	Most of the times (%)
Hypertensive	15.2	28.2	14.3	15.2
Non-hypertensive	66.7	0.15	0.19	0.0

($\chi^2 = 25.92$, df = 1, P < 0.05)

the hypertensive subjects were not satisfied with the present scenario of the working condition. Significant association was observed in between the level of satisfaction and hypertensive subjects ($\chi^2 = 25.92$, df = 1, P < 0.05).

Depression and hypertension were significantly associated with each other ($\chi^2 = 30.5$, df = 3, P < 0.05). Table 3 shows that 15.2% hypertensive subjects had no sign of depression, while 28.2%, 14.3% and 15.2% had depression to occur, either occasionally or most of the times, whereas it was observed that 66.7% of the non-hypertensive had no depression at any time and only 0.19% had depression occasionally.

The results from the study revealed that apart from life style, faulty diet, uneven form of exercise the other factors like sleep disorders, depression and dissatisfaction with working conditions also to be the causative factors for hypertension.

All aspects of blood pressure homeostasis support the efficiency of adequate diet, and life style factors on the prevention and treatment of high blood pressure. The control of blood pressure by dietary means offers a great approach for the management of hypertensive patients. According to Vasan *et al.* (2001), dietary and life style changes often reduce and some time eliminate the need for modification and the development of adverse drug side effect that may accompany high dosage. In clinical

practice, a non-pharmacologic approach to the treatment of hypertension emphasizes weight control, physical activity, moderate sodium restriction, moderation in alcohol intake, a diet rich in calcium, potassium and magnesium. These non-pharmacological approaches significantly bring improvement in hypertensive people, although small but had an enormous impact when applied to large population group.

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