Efficacy of Garlic Extract in Hypertensive Patients: An Explorative study.

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Introduction

One common adult ailment is hypertension or high blood pressure. About 10 million people are estimated to have high blood pressure but are unaware of their condition. Approximately 25 per cent of adults in cities and 10 per cent in rural areas suffer from hypertension, according to research conducted in India. Overall hypertension incidence in India is estimated at 66 million people.

According to a survey conducted by the Indian Physician Association, urban areas in the country had a substantially higher incidence of hypertension by 27-37 percent compared to rural areas by 2-8 percent (Agarwal-2001). In India, about 20 percent of the adult population is suffering from hypertension, making it the largest silent killer in the country. Nearly 90 percent of cases slip from this into the primary category as essential hypertension.

It has been shown that aged garlic extract decreases several cardiovascular risk factors including blood pressure , cholesterol, and platelet aggregation and adhesion, while stimulating nitric oxide production in endothelial cells. A recent placebo-controlled, double-blind,

Research evaluated the ability of aged garlic extract to prevent vascular calcification, a plaque forming marker in human coronary arteries, in 23 patients with atherosclerosis. The results suggest that aged garlic extract can inhibit the progression of coronary calcification and suggest a therapeutic role for garlic in patients at high risk for future cardiovascular events. Diet is the cornerstone of any hypertension treatment plan without effective dietary intervention; normally, good metabolic regulation is unlikely. Changes in diet are of prime importance. Prevention and correction of obesity is a smart way to reduce the risk of hypertension other measures to control hypertension include stress reduction, of relaxation techniques encouraging drug exercise, avoidance of smoking and

Too much drinking.

Dietary modification remains crucial in treating patients with hypertension and in avoiding complications due to hypertension. The blood pressure can be managed by life style changes and dietary management. It helps avoid worldwide hypertension events (Association of Physicians in India 2001).

Nurses provide a large portion of health care and they have opportunists to recognise, determine, the health needs of these patients. They can offer follow-up – care to them in order to retain an efficient control of hypertension. It is important to assess people's lifestyle and to determine the risk factors in hypertension before providing promotional health services, nurses may help recognise and adjust the risk factors of hypertension in various ways. The literature review was performed for the present study and presented under headings such as, hypertension and management studies, garlic and health research, research related to the impact of garlic on hypertension. The conceptual structure adopted for the present study was focused on the CIPP model. This model helped the researcher determine the blood pressure before and after administering garlic..

Methodology

The method adopted for the research was of an evaluative nature. The research design chosen for this study was a quasi-experimental design to be precise, repetitive time series measures designed to assess the impact of garlic on blood pressure among hypertensive patients. A systematic interview / observation schedule was the method created and used for the data collection. The tool was both accurate and workable. The pilot study was performed among patients who met sample selection requirements and hypertensive patients. We considered the analysis to be feasible.

The main study was carried out at OPD Hospital Govt Dehradun, Uttarakhand. We selected 40 hypertensive patients (20 in the experimental group and 20 in the control group) from among those who met the sample selection criteria using quota sampling. Prior authorisation was sought and obtained from the authorities, informed individually and consent was obtained from the test samples after confirmation of the purpose of the study. Confidentiality developed. In experimental group blood pressure was assessed before and after garlic administration. Pre- and post-test blood pressure was measured without any intervention from the control group. The difference between the pre- and post exams had been 21 days. Using the SPSS kit (version 10), the data collected were analysed using inferential and descriptive statistics.

Results

Majority of hypertensive patients in experimental group were in age group of 51-65 years 9(45%), were females14(70%), had high school education 6(30%), were married 16(80%), were unemployed 13(65%) reported their work as both physically and psychologically demanding 6(30%), belonged to nuclear family 19(95%), had non-vegetarian dietary habits 18 (90%), duration of illness more than five years 12(60%), took medications very regularly 17 (85%), equally had both less than 8 hours of sleep 7(35%) and 8 hours of sleep 7 (35%) equally had afternoon naps, had no exercise 17(85%). Majority of hypertensive patients in control group were in age group of more than 65 years 8(40%), females10(50%) and males 10(50%) equally distributed, had high school education 9(45%), were married 17(85%), were unemployed 11(55%) reported their work as both physically and psychologically demanding 7(35%), belonging to nuclear family 19(95%) ,had non - vegetarian dietary habits19(95%), duration of illness less than two years 8(40%), taking medications very regularly13(65%), had sleeping hours less than 8 hours11(55%), not practicing afternoon naps 13(65%), had no exercise 15(75%).

Major finding of the study •

There was a significant reduction in the mean systolic blood pressure after garlic administration among hypertensive patients in experimental group t = 7.179 (P = 0.001). There was a significant reduction in the mean diastolic blood pressure after garlic administration among hypertensive patients in experimental. The mean difference in systolic blood pressure among hypertensive patients in experimental group was significantly more than control group t = 2.982 (P = 0.005). The mean difference in diastolic blood pressure among hypertensive patients in experimental group was significantly more than control group t = 2.867 (P = 0.007).

There was significant association between sex, t=2.699(p=0.036); nature of work t=2.575(p=0.042); duration of illness t=5.099(p=0.002); exercise, t=3.371(p=0.015) and mean difference in systolic blood pressure among hypertensive patients. There was no significant association between age, t=0.533(p=0.613); occupation, t=0.643 (p=0.544); type of family, t=0.913 (p=0.396); regularity of taking medications, t=0.345 (p=0.742); sleeping hours t=1.520 (p=0.179) and mean difference in systolic blood pressure among hypertensive patients. There was significant association between occupation t= 2.936 (P=0026) and type of family, t=2.679(p=0.037) and mean difference in diastolic blood pressure among hypertensive patients.There was no significant association between age, t= 1.062 (P=0.329);sex, t=1.237 . (P=0.262);nature of work, t= 1.207 (P=0.273);duration of illness, t=0.663 (p=0.532); regularity of taking medications, t= 1.133 (P=0.301);sleeping hours, t=0.426 (P=0.685); exercise, t=1.163 (P=0.147) and mean difference in diastolic blood pressure among hypertensive patients

Conclusion

The study concluded that the nurse should teach the value of using garlic in their diet for blood pressure reduction among hypertensive patients, in addition to the pharmacological care. A decrease in systolic blood pressure is often associated with the intensity of the work demand, the length of the illness and exercise. Customers must be able to relax when completing the necessary exercises at the same time.

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