

Assessment of non-pharmacologic treatments of hypertension

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Abstract

BACKGROUND: Hypertension is the most risky factor of coronary artery disease and strokes. Attention to non-pharmacologic treatment can be one of the most important goals in treating hypertension. The aim of this study is the assessment of effective non-pharmacologic methods of hypertension.

METHODS: In this review study, books, articles and some sites that are related to non-pharmacologic methods of treatment of hypertension were used. Then, the subjects were studied and the obtained findings were compiled as an essay.

RESULTS: The appropriate planning for regular control of blood pressure, reduction of dietary salt intake, caloric restriction (to prevent obesity, and reduce consumption of saturated fats and cholesterol) elimination of environmental stress, regular exercise, and periodic control of blood pressure can prevent its complications. Among the non-pharmacologic treatment methods that are used to treat and control hypertension are progressive relaxation technique, massaging therapy, family counseling, and quitting smoking.

CONCLUSION: Findings indicate that non-pharmacologic treatment can reduce complications and risk factors of hypertension, and sometimes even be used as initial treatment for hypertension.

Keywords: Hypertension, Treatment, Non-pharmacologic Methods

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Introduction

Hypertension means increasing of blood pressure in arteries; blood pressure higher than 140 millimeters mercury is called systolic blood pressure, and higher than 90 millimeters mercury is called diastolic blood pressure.¹ Hypertension is the most risky factor of coronary artery disease and strokes, and these diseases are the causes of half of the mortality rate in the US.² In a study the prevalence of hypertension in the general population in Qazvin has been reported to be 25% and in adults 32% .³ The researchers have reported that hypertension all over the world has been out of control; so that during the past 20 years the number of patients with this disease has been more than one billion people.⁴ Those who have hypertension are at risk of stroke, congestive heart failure and shock 3, 6 and 7 times more than normal people. Today in many researches the emphasis is on prevention, control, and treatment of hypertension. Therefore, according to the heavy cost of treatment of hypertension, attention to non-pharmacologic treatment can be one of the most important goals in the treatment of hypertension.⁵ The aim of this study

is the assessment of effective non-pharmacologic methods of hypertension.

Materials and Methods

In this review study, available books related to non-drug methods on hypertension, and available articles in scientific information databases, Google in the form of “full text”, and on other sites were used. Then, subjects were studied and the findings were compiled in the form of an article.

Results

Hypertension is a risk factor for cardiovascular disease, and can lead to atrial fibrillation, congestive heart failure, stroke, and renal failure.⁶ Unconsciousness of their disease in people with hypertension, and the neglect of adequate and effective treatment in those who are aware of their condition are considered as great social problems.⁷ The appropriate planning for regular control of blood pressure, reduction of dietary salt intake, caloric restriction (to prevent obesity, and reduce consumption of saturated fats and cholesterol) elimination of environmental stress, regular exercise,

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and period control of blood pressure can prevent its complications.⁸

Today, by the changing of the health care system most patients receive much professional care after hospital discharging. Moreover, the two important principles of presentation of health care in the patient's environment, and saving health care costs are the priorities of health policies in the 21st century.⁹

In fact, controlling of blood pressure at home helps the evaluation of the effectiveness of medications and it can help the diagnosis of potential complications of hypertension by doctors. Controlling of blood pressure at home can reduce the number of doctor visits.¹⁰

Some nutritional factors, which may reduce blood pressure, are increasing potassium, calcium, fiber and magnesium consumption and reducing energy and sodium consumption.¹¹ Restriction of salt consumption can somewhat reduce blood pressure, so eating salty foods should be avoided.¹² Furthermore, high blood cholesterol causes fat deposition in artery walls and formation of fatty plaques, and finally causes artery stenosis and increases blood pressure.¹³ Choosing low fat foods and consuming boiled, steamed or roasted food and not consuming fried food is effective in reducing blood pressure. Moreover, with weight loss blood pressure is greatly reduced. For some individuals losing weight is the only requirement for reducing their blood pressure.¹⁴

Stress and anxiety can stimulate adrenal glands and the sympathetic system and lead to increase in blood pressure, irregular breathing, asthma, increase in respiratory rate and pulse rate and in cases where this is repeated the person catches blood pressure and other illnesses.¹⁵ If stress is managed and effective coping skills exist, surely the person can better cope with needs and life challenges, and can eliminate the destructive influences stress has on their body and mind.¹⁶ One of the non-pharmacologic methods in the treatment and control of hypertension is progressive relaxation technique.¹⁷ Recent studies show that this technique is an effective method to fight against stress. By applying this method the physiological adverse effects of tension can be removed and symptoms of hypertension and other complications can be prevented.¹⁸ Stress and anxiety cause muscle tension, which can be removed massaging; massaging sends the message that the muscles are relaxed to the brain. Therefore, massaging each part of the body results in relaxation of the whole body and creates new energy for the person to deal with incidents.¹⁹ Some studies have shown that

massaging of the back in sick people causes a reduction in blood pressure, heart rate and temperature.²⁰

Regular aerobic exercise is one of the non-pharmacologic treatments for controlling blood pressure. Regular aerobic exercise causes a reduction of 11 mmHg in systolic blood pressure and 8 mmHg in diastolic blood pressure. One regular physical activity program should start gradually and continue for 30-45 minutes most days of the week. This level of activity can control blood pressure without medication.²¹

Another non-pharmacologic treatment method that is used to treat and control hypertension is family counseling. The patient's family should participate in training programs in order for them to understand the patient's needs and be able to support and look after him/her to follow the treatment program.⁷ Families as social support systems can be considered for education, in order to change people's behavior. It seems that educating the patient and the family together and involving the family in educational programs increases the ability of individuals to establish and maintain lifestyle changes.²²

Smoking can damage the vascular wall and accelerate the process of hardening and narrowing of the arteries.¹⁰ Due to the many toxins in the cigarette, it is associated with hypertension; it causes the person to be strongly at risk of cardiovascular disease and increases the risk of MI and stroke. If the patient stops smoking, the risk will return to the normal amount.¹³

Discussion

Findings indicate the influence of factors such as regular follow up, reducing salt intake, weight loss, reduction of fat, and elimination of stress by using techniques such as relaxation and massage therapy, regular exercise and family counseling on hypertension. It seems that non-pharmacologic treatment can reduce the complications and risk factors of hypertension, and sometimes can even be used as initial treatment for hypertension. Finally intervention and clinical research are recommended in order to determine the effects of these techniques on hypertension, because these treatment techniques are low-cost and more accepted.

Conflict of Interests

Authors have no conflict of interests.

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