

Original Research Article
**Diet Practices in Hypertensive Patients in Tertiary Care
Hospitals- A Prospective Study**

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Abstract: Unhealthy diet and physical inactivity contribute to around 30% of preventable morbidity and mortality from noncommunicable diseases, including morbidity and mortality due to hypertension. Hypertension is a condition associated with increased risk for stroke, cardiac failure, renal failure and peripheral vascular disease.continuing costly cycle of managing hypertension and its complications.

Aim of study: To assess Diet practices,Knowledge, Awareness, Attitude in newly detected Hypertensive patients in a tertiary care hospital- prospective study

Material and Methods: All hypertension patients attending various out-patient departments in tertiary care medical colleges in Tamil nadu are taken for study during the period of January 2017- June 2017

Results: Our findings indicate that there is significant relationship between awareness and knowledge; awareness and attitude; awareness and practice. There is no significant relationship between knowledge and attitude or knowledge and practice. In addition, there is a significant relationship between attitude and practice of the patients. Thediet in hypertension 13 % are vegetarian and 45 % consumed non vegetarian once in a month, 27% weekly once, 25%weekly twice , 2% daily. Among the type of non vegetarian diet 1% consumed 2 times egg , 66% ate chicken meat, 31% consumed goat meat and 3% other meat (prawn,crab,duck)

Conclusion: According to our results, in spite of having good knowledge, awareness, attitude, and practice, blood pressure of our participants is not under control. This suggests that there are other barriers Many factors are effective in uncontrolled hypertension including patient related factors (e.g. age, life style, BMI, yearly physician appointment, ...), treatment related factors

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I. Introduction

Consuming a healthy diet throughout the lifecourse helps prevent malnutrition in all its forms as well as a range of noncommunicable diseases and conditions. But the increased production of processed food, rapid urbanization and changing lifestyles have led to a shift in dietary patterns. People are now consuming more foods high in energy, fats, free sugars or salt/sodium, and many do not eat enough fruit, vegetables and dietary fibre such as whole grains.

The exact make-up of a diversified, balanced and healthy diet will vary depending on individual needs (e.g. age, gender, lifestyle, degree of physical activity), cultural context, locally available foods and dietary customs. But basic principles of what constitute a healthy diet remain the same.

Clearly, the dietary factors influencing hypertension will be as complex .But there are a few individual foods and nutrients that deserve special mention, either for better or for worse.

It's well documented that intake of sugar-sweetened drinks is a huge predictive factor for hypertension. So does fructose by itself raise blood pressure? Not in its natural form. Fruit is perfectly safe to eat, and even beneficial for blood pressure because it's a good source of other minerals like potassium. But sugary soft drinks are definitely a source of fructose to avoid.

Healthy weight. Physical activity has been shown to lower the overall risk of all-cause mortality between the ages of 45 and 84 by 18%. To reduce blood pressure, maintain a healthy weight with a body mass index between 18.5 and 24.9.

Healthy eating. Adapting the DASH (Dietary Approaches to Stopping Hypertension) eating plan can reduce blood pressure by 8–14 mmHg. The DASH diet consists mainly of fruits, vegetables and low-fat dairy products and includes whole grains, poultry, fish and nuts while limiting the amount of red meat, sweets and sugar-containing beverages.

Saturated and trans fatty acid intake. Intake of saturated fatty acids should be reduced to less than 10% of total energy consumption, and trans fatty acids to less than 1%. Intake of trans fatty acids can be reduced by replacing them with polyunsaturated fatty acids.

Reducing or eliminating meat may influence blood viscosity. Numerous studies have linked beef, veal, lamb, poultry and animal fat to high blood pressure. Saturated fat appears to influence blood viscosity. A higher proportional intake of fatty acids from polyunsaturated sources (linoleic acid and alpha-linolenic acids), compared with saturated fats, is associated with lower risk for developing hypertension.

The dietary recommendations for hypertension take the familiar “whole grains, low fat” line. The available evidence supports the idea that high carb is not better – in one study a low-carb diet was much more effective than a plain weight-loss diet at treating blood pressure.

In other words, a Paleo diet is a safe and effective way of eating for people with high blood pressure. This probably has to do with a lot of factors, including better insulin control, weight loss, more potassium from fruits and vegetables, and less processed food. Essentially, Paleo removes the modern food toxins that contribute to metabolic syndrome and the related constellation of problems, which include hypertension.

From the information that we have about the causes of hypertension, a Paleo diet and lifestyle seems to be an effective, simple, and safe way of treating high blood pressure. There are also some tweaks to the diet that can make it even better, including supplements and specific lifestyle changes that show some effectiveness in treating hypertension. Minerals act with sodium in the body to regulate blood pressure. Paleo is naturally rich in these minerals, but supplementing may also be useful.

High blood pressure is closely connected with oxidative stress and inflammation, so supplementing with vitamins and antioxidants may have some benefit.

Breathing exercises, are an effective, safe, and free therapy that anyone can do. Deep breathing activates the parasympathetic immune system, which turns on the “rest and digest” mode and turns off the “fight or flight” response. Even if you don't have any blood pressure problems, these exercises are an easy way to relax after work, or add a bit of sanity to the middle of a hectic day.

II. Aim of the study

Materials and methods

All the hypertension patients attending various out-patient departments in tertiary care medical colleges in Tamil nadu are taken for study. With a help of standard questionnaire the patients attending the medicine out patient department and NCD(non communicable disease) out patient facility were enquired during january 2017 to june 2017. In addition, we studied some background variables including age, gender, educational level and duration of high blood pressure.

Results :

467 randomly selected patients were questioned and data was analysed. The diet in hypertension 13 % are vegetarian and 45 % consumed non vegetarian once in a month, 27% weekly once, 25% weekly twice, 2% daily. Among the type of non vegetarian diet 1% consumed 2 times egg, 66% ate chicken meat, 31% consumed goat meat and 3% other meat (prawn, crab, duck)

GENDER	PERCENTAGE
Male	68%
Female	32%
MARITAL STATUS	
Married	64%
Single	26%
Widow	10%
EDUCATIONAL LEVEL	
Illiteracy	12%
Primary school	36%
Higher school	40%
Undergraduate	12%
DUATION OF BLOOD PRESSURE	
<10 YRS	68%
11—20 YRS	28%
>20 YRS	4%

Knowledge, Awareness, Attitude, Practice	Percentage
Patient's awareness hypertension	76%
Patient.s knowledge of hypertension	31%
Patient's attitude of hypertension	72%
Patient's practice of hypertension	72%

DISCUSSION

Technology advancement, availability of multiple media (such as TV or radio) have a significant role in increasing awareness (76%) .All subjects were aware of their hypertension and 31% of the patients knew that hypertension could lead to complications. Khosravi et al concluded that almost fifty percent of the patients knew that they have hypertension, and most cases were on antihypertensive medications.Egan et al recognized that most hypertensive patients have concerns about their condition. Most cases agreed that decreasing blood pressure could be effective on health. In addition, they are aware of hypertension complications and advantages of lowering blood pressure. Victor et al's study indicated that most patients had high awareness, more than half were under treatment but had uncontrolled hypertension. These findings showed that despite high awareness, patients had poor and inappropriate practice for hypertension management.

Viera et al findings indicated that most patients know that high blood pressure is life threatening, and its most common reason is using rich salt diet; but some patients, which were elderly and African-American ethnicity, did not agree to this idea. Most patients reported that they often do not feel HTN and have no symptom. A little percent did not know or were not sure that BP > 140/90 is called HTN. Victor et al's study also indicated that patients believed that HTN have signs and symptoms and it is not asymptomatic and silent killer.

Patient's attitude were good (72%). In Oliveria et al's report less than 50% of hypertensive patients did not accept HTN as a serious health problem and they believed that it is unavoidable. Almost half of them were not aware of their blood pressure level, and could not express correct categories of high blood pressure.Victor et al concluded that most patients believed that medication prescription was an effective treatment and garlic, herbs, or vitamins were also effective treatments. Having diabetes mellitus that attracts patient's attention to medications was also associated with a greater likelihood of HTN awareness and treatment but not controlling their disease.

In this study, patients' practice score were very good (72%). In Aubert et al's study, most patients believed that salty diet, obesity and smoking are important factors in hypertension. They mentioned that physical activity and exercise are very important factor in hypertension management. More than half aware patients mentioned that taking antihypertensive drugs is a life-long necessity. Patients with more awareness often had regular physician/health care provider , monitored their blood pressure monthly , decreased salt consumption , and had less exercise and physical activity than others did. This study showed that patients with more awareness had better attitude than patients with less awareness, but both group had the same action.

Conclusion

According to our results, in spite of having good knowledge, awareness, attitude, and practice, blood pressure of our participants is not under control. This suggests that there are other barriers Many factors are effective in uncontrolled hypertension including patient related factors (e.g. age, life style, BMI, yearly physician

appointment, ...), treatment related factors (such as noncompliance to the same protocol, ineffectiveness of applying one category of antihypertensive drug, ...), clinical assessment related factors (BP monitoring technique and its time, e.g. morning, evening, before/after drug taking), and equipment related factors (type of sphygmomanometer). Hypertension is definitely a “disease of civilization” influenced by the perfect storm of the modern sedentary lifestyle and sugar/grain-based diet.

Key facts

- A healthy diet helps protect against malnutrition in all its forms, as well as noncommunicable diseases (NCDs), including diabetes, heart disease, stroke and cancer.
- Unhealthy diet and lack of physical activity are leading global risks to health.
- Healthy dietary practices start early in life – breastfeeding fosters healthy growth and improves cognitive development, and may have longer-term health benefits, like reducing the risk of becoming overweight or obese and developing NCDs later in life.
- Energy intake (calories) should be in balance with energy expenditure. Evidence indicates that total fat should not exceed 30% of total energy intake to avoid unhealthy weight gain, with a shift in fat consumption away from saturated fats to unsaturated fats, and towards the elimination of industrial trans fats
- Limiting intake of free sugars to less than 10% of total energy intake is part of a healthy diet. A further reduction to less than 5% of total energy intake is suggested for additional health benefits.
- Keeping salt intake to less than 5 g per day helps prevent hypertension and reduces the risk of heart disease and stroke in the adult population.
- WHO Member States have agreed to reduce the global population’s intake of salt by 30% and halt the rise in diabetes and obesity in adults and adolescents as well as in childhood overweight by 2025.

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