



HYPERTENSION: AN AYURVEDIC PERSPECTIVE

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ABSTRACT

Hypertension (HTN) is a major public health issue worldwide, because of its high prevalence and concomitant increase in the risk of disease. In the contemporary situation *Hypertension* is the most critical disease in the world. If we focus on the present situation then we can see that due to rapid globalization we are facing *Hypertension*. Due to rapid modernization, people are leading more stressful lives. As a result, hypertension is one of the widespread disorders which came across in practice. Ab. India is labelled as the global capital of hypertension. Nowadays, not only lifestyle disorders are becoming more common, but they are also affecting younger populations. Hence, the population at risk shifts from 40+ to maybe 30+ or even younger. Hypertension results from a variety of reasons like stress, obesity, genetic factors, overuse of the salts in the diet and ageing etc. As we all know, *Hypertension* is called a silent killer because it rarely exhibits symptoms before it damages the heart, brain or kidney. Though a lot of potent antihypertensive drugs are available today in modern medicine, none of them is free from untoward effects. The principal focus of *Ayurveda* is on maintaining good health and adopting a healthy way of life. In *Ayurveda*, there is no description of such a single disease that can resemble hypertension. As per *Ayurvedic* principles, in case of an unknown disease, the physician should try to understand the nature of the disease through *Dosha*, *Dushya* and *Samprapti*; then should initiate the treatment. So, it becomes our prime concern to understand hypertension thoroughly with an *Ayurvedic* perspective. *Hypertension* (HTN or HT), also known as *High blood pressure* or *arterial hypertension*, is a chronic medical condition in which the blood pressure in the arteries is persistently elevated. Hypertension is one of the major causes of cardiovascular morbidity and mortality

worldwide. It is a global health problem affecting people of different ethnicity and ages around the world. It is an asymptomatic medical condition in which systemic arterial blood pressure is elevated beyond the normal value.

Keywords: *High Blood Pressure, Lifestyle disorders, Silent killer.*

INTRODUCTION

Hypertension (HTN or HT), also known as *high blood pressure or arterial hypertension*, is a chronic medical condition in which the blood pressure in the arteries is persistently elevated. *Hypertension* is one of the major causes of cardiovascular morbidity and mortality worldwide. It is a global health problem affecting people of different ethnicity and ages around the world. The basis for diagnosing and managing hypertension is the measurement of BP, which is routinely used to initiate or rule out costly investigations and long-term therapeutic interventions. Inadequate measurement methodology or use of inaccurate BP measuring devices can lead to overdiagnosing and exposure to preventable cardiovascular disease (CVD). The World Health Organization (WHO) has identified India as one of those nations that are going to have most of the killer because it rarely exhibits symptoms before it damages the heart, brain, or kidney.¹ It is an asymptomatic medical condition in which systemic arterial blood pressure is elevated beyond the normal value. Hypertension is an important worldwide public health challenge and remains a major cause of morbidity and mortality worldwide.² Hypertension is called a silent killer, non-communicable chronic disease because it rarely exhibits symptoms before it damages vital organs like the kidney, brain, or heart. Nearly 63% of total deaths in India are due to non-communicable diseases which affect 45% of people in the 40-69 age group. Raised blood pressure is among the most important risk factors for CVDs. Moreover, it remains poorly controlled due to low awareness about hypertension, lack of appropriate care through primary care and poor follow up. About 26.4% of the world adult population in 2000 had hypertension and 29.2% were projected to have this condition by 2025.³

The following factors made me go for a clinical study on *Essential hypertension*:

- *Essential hypertension* is one of the common complaints of this modern era and is the silent killer of mankind.
- It is a risk factor for all clinical manifestations of atherosclerosis.
- It is an independent predisposing factor for heart failure, coronary artery disease, stroke, renal disease, and peripheral arterial disease and rarely exhibits symptoms before it damages vital organs like the kidney, brain or heart.

- *Hypertension* (HTN or HT), also known as *high blood pressure or arterial hypertension*, is a chronic medical condition in which the blood pressure in the arteries is persistently elevated. *Hypertension* is one of the major causes of cardiovascular morbidity and mortality worldwide. It is a global health problem affecting people of different ethnicity and ages around the world. It is an asymptomatic medical condition in which systemic arterial blood pressure is elevated beyond the normal value. Hypertension is a chronic and often asymptomatic medical condition in which systemic arterial blood pressure is elevated beyond normal. As such, the heart is forced to work harder to overcome the increased systemic pressure to deliver blood to tissues, which puts strain on the heart and arteries. Over the period, the additional strain leads to cardiovascular dysfunction and is a primary contributing cause of congestive heart failure, myocardial infarction, pulmonary embolism, cerebral aneurysm, and kidney failure.⁴

Types of Hypertensions-

There are two types:

1. *Primary or essential hypertension* (97-98%) has no clear underlying cause but appears to be the result of the interplay of complex genetic and environmental factors.
2. *Secondary hypertension* (2-3%) is caused by a specific underlying mechanism usually involving the kidneys or endocrine system.

Factors Affecting Blood Pressure- These include Vessel Elasticity, Blood Volume, Cardiac Output, Peripheral Resistance. Peripheral resistance depends upon blood viscosity, vessel diameter and vessel length. -The tension exerted on the wall of arteries by the strength of the contraction of the heart is called "Blood Pressure".⁵ Several other factors and conditions may play a role in the development of hypertension such as smoking, overweight or obesity, lack of physical activity, excessive salt intake, alcohol consumption, stress and family history of high blood pressure.⁶ There is a close connection between our body and our mind. If there is a psychological factor affecting a medical condition, it is important to treat the psychological problem as well as the medical problem. If there is stress-related hypertension treatment should be planned accordingly. As per *Ayurveda*, Vata is the regulator and stimulator of Mana (mind). One should not neglect this basic principle while treating hypertension.⁷

Ayurvedic Perspective:

Description of *Hridaya* and processes of *Rasa Vikshepana* (circulation) by *Vyana Vayu* is helpful to understand the disease. Though the exact nomenclature of the disease to some extent is controversial, the signs and symptoms of the disease can be understood in terms of *Dosha*, *Dushya*, *Strotasa*, etc. Looking at *Hypertension* from this perspective, we can assume that vitiated *Vata Dosha* is the main cause of the disease, as the *Dhatu Gati (Rasa Gati) or Vikshepa* is achieved by *Vayu* itself.⁸ *Pitta* and *Kapha* complement the effect of vitiated *Vata* and support the progress of the disease with *Rasa, Rakta* (whole blood) being the main mediator of vitiation. This suggests the involvement of *Tridosha* in *Hypertension*. Inference of previous research work done is that hypertension is nothing but a '*Vata Pradhan Tridoshaja Vyadhi*', be greatly influenced by *Mana*. Therefore, it may be considered as *Sharir* and *Manas Roga (Ubhayashrita Vyadhi)*. *Sharir* and *Satva (Mana)* have been designated as the habitats of *Vyadhi* by *Acharya Charaka*.⁹

Factors involved in Hypertension

DOSHA:

Prana Vayu: In modern science, the functions of the nervous system have been described as a description of the Prakriti *Prana Vayu*. '*Hridaya Dhruka*; (i.e. Dharana of Heart) the function of *Prana Vayu* can be correlated with the vagal inhibition of the nervous system.¹⁰ In addition to this, the vasomotor centre controls the blood pressure by the autonomic nervous system; similarly, *Prana Vayu* also controls the regulation of blood pressure by controlling *Vyana Vayu*. So, pathology of *Prana Vayu* can cause abnormality of heart as well as vessels.

Vyana Vayu: *Vyan Vayu* is said to be responsible for various kinds of movements in the body.¹¹ With the help of *Vyan Vayu*, the heart contracts and propels blood (*Rasa Rakta Dhatu*) continuously all over the body. So, it suggests the involvement of *Vyana Vayu* in the regulation of blood pressure.

Samana Vayu: According to *Sharangadhara* after the digestion process '*Samana Vayu*' helps in the transportation of *Rasa* into the heart and from there it circulates in the whole body.¹² Thus *Samana Vayu* has an important role in circulation.

Apana Vayu: Vitiating of *Apana Vayu* hampers the excretion of the *Purisha* and *Mutra* affecting homeostasis which may affect blood pressure. From the above fact, it can be concluded that *Apana Vayu* also plays a role in the regulation of normal blood pressure.¹³

Avalambaka Kapha: Normal rhythm, contractility, and tone of cardiac muscles can be correlated with functions of *Avalambaka Kapha*.¹⁴ Thus; it keeps the heart in a healthy state and enhances its continuous pumping capacity.

Dushya: In the circulatory system *Aahar rasa, Rasa Dhatu* and *Rakta Dhatu* are the entities that circulate all over the body. In the context of blood pressure, *Rasavaha* and *Raktavaha Srotasas* are important as they are related to '*Rasa-Rakta Samvahana*'. *Annavaha Srotas* gets vitiated due to untimely intake of a large quantity of unwholesome food and impairment of *Agni* (digestive capacity).

Rasa Dhatu- Acharya Charaka in *Vimanasthana* described various factors responsible for *Rasavaha Srotas Dushti*, viz. excessive intake of *Guru* (heavy),

Shit (cold), excessively unctuous food, and constant worry.

Rakta Dhatu- *Raktavaha Strotas* gets vitiated due to intake of food and drinks which are irritant, unctuous, hot and liquid; excessive exposure to sunlight and fire.¹⁵

Agni: *Agni* is an important factor in the pathogenesis of all the diseases *Agni Dushti* occurs at two levels *Jatharagni Mandya* and *Dhatwagni Mandya*. *Atimatrashana* (excessive diet), *Viruddhashana* (intake of food having opposite properties), and *Adhyashana* (intake before the digestion of previous food) are the factors that cause *Jatharagni Mandya*. It will affect all other *Agni* viz. *Sapta Dhatvagni* and *Panchamahabhutagni*. *Jatharagni Mandya* will cause *Ama* formation which results in *Strotorodha* and vitiation of all *Doshas*. It will ultimately increase peripheral resistance and can lead to hypertension. Atherosclerotic changes in vessels can be an outcome of chronic *Agnimandya* and *Ama*. *Acharya Charaka* has already described *Dhamani Praticaya* as one of the *Nanatmyaja* diseases of *Kapha dosha*.¹⁶

Mana: In *Ayurveda Pradnyaparadha* and *Asatmendriyarthasamyoga* is considered as the root causes for every disease, which indicate the involvement of the psyche. *Manas Bhavas* like *Chinta* (worry), *Krodha* (anger), *Bhaya* (fear) etc. plays an important role in the pathogenesis, progression, and prognosis of disease as well as response to the treatment of the disease.¹⁷ This fact reveals that *Mana* is also involved in hypertension and the disease should be considered psychosomatic. Modern medical science also considers the involvement of the psyche as a causative factor for hypertension.

Samprapti (Pathogenesis of hypertension): Most of the mechanisms associated with secondary hypertension are crystal clear and completely understood. However, those associated with essential hypertension are far less understood. The pathogenesis of hypertension takes place at both the physical and psychic level one at a time or simultaneously depending upon the *Dosha-Dushya Sammurchhana*. *Agnidushti* results in *Ama* formation and subsequent *Dhatudushti* (*Rasa and Rakta*). This leads to *KhaVaigunya* i.e.

obstructive pathology in channels. The *Ama* production results in *Strotorodha* (obstruction) and thus partially blocks the normal *Rasa Rakta circulation* which further vitiates *Vyana Vayu*. This obstructed *Vyana Vayu* leads to forcible blood flow in the blood vessels causing increased resistance, thereby increasing blood pressure.¹⁸

Chikitsa (Treatment): Treatment of *Hypertension* should be planned according to *Dosha* and *Dushya* involved in pathogenesis. *Manasa Bhavas* like *Chinta*, *Krodha*, *Bhaya*, etc., plays an important role in the pathogenesis, progression, and prognosis of the disease, and also affect the response to the treatment. Hence, the type of therapy recommended should be one that can pacify these disturbed *Manasika Bhavas*.

Panchakarma: *Abhyanga* (Massage) – *Sarvanga Abhangya* with specially formulated oils helps to increase elasticity and flexibility. It corrects and enhances the blood flow healthily. a- *Vaman* and *Virechan* (Emesis and purgative therapy) – If the patient is having *Uttam Bala* and having the mild or moderate type of hypertension without any other complications then *Shodhana* procedures like *Vaman*, *Virechan* can be advised according to *Dosha Pradhanya*. b- *Basti* (Medicated enema): – *Basti therapy* is specially designed for *Vata* disorders. It is also called *Ardha Chikitsa* by stalwart *Acharyas*. According to *Dushti Dosha* and *Rugna Bala, Karma, Kala or Yoga Basti* can be advocated.

Diet: Dietary modification is very important to prevent the development of hypertension or potentially combat and reduce high blood pressure. Lowering sodium intake (especially from table salt) reduces excessive water retention, which helps maintain normal blood pressure.¹⁹ Excessive use of sodium chloride is toxic and damaging to arteries and other tissues, which may initiate atherosclerosis and lead to hypertension. Adopting a high potassium diet helps rid the renal system of excess sodium and restore sodium/potassium balance. *Acharya Charaka* has also considered *Lavana* as a substance not to be used in excessive quantity for a longer duration.²⁰ Additional dietary changes beneficial for reducing blood pressure include adopting a diet that is rich in fruits,

vegetables, whole grains and low-fat dairy products, reducing consumption of refined sugar and heavily processed food, reducing caffeine intake, and limiting alcohol consumption.²¹

Yoga: Stress reduction from practising meditation, yoga, and other mind-body relaxation techniques can lower blood pressure.²² Yoga is formulated for many reasons and health restoration is one of them. *Shavasana*, *Sukhasana* *Dhanurasana*, *Makarasana*, *Vajrasana*, along with the regular practice of *Pranayama* are found to be very useful for lowering blood pressure in normal as well as hypertensive individuals if performed accurately and adopted as a lifestyle.²³ According to *Bruhadaranyaka* and *Chhandogya Upanishads* the ultimate aim of *Pranayama* and *Yogic* techniques is to control *Prana*. This target is difficult to achieve, but mental peace and relaxation thus achieved could be used as a therapeutic tool. Patel and others in Britain have shown that meditation and prayer techniques lower blood pressure on a short term and long-term basis. This factor may be important in the primary prevention of coronary atherosclerosis. On a metabolic level, it causes a decrease in various biochemical inducers and aggravators of atherogenesis. *Hrudayotpatti: Acharya Sushruta* has described '*Shonit Kapha Prasadajam Hridayam*', which means while the development of *Garbha* in the uterus, the heart is formed by the purest portion of *Rakta* (blood) and *Kapha*.²⁴ These originating constituents should be considered while treating cardiac ailments. Drugs acting on these constituents can offer more reliable results.

Other strategies effective at reducing blood pressure - These include weight reduction and regular aerobic exercises such as brisk walking, jogging running etc. Weight loss reduces the resistance burden on the vascular system, and regular exercise improves blood flow and helps to reduce resting heart rate and blood pressure. Discontinuing tobacco use in any form has also been shown to lower blood pressure. The tar of smoke and the injurious components of the tobacco produce hardening of blood vessels (arteriosclerosis), plaque in the blood vessels, which can make narrowing of the inner diameter of blood ves-

sels. Abstaining from cigarette smoking reduces the risks of stroke and heart attack associated with hypertension. Alcohol consumption can enhance fat accumulation.²⁵ Obese people often have hypertension (elevated blood pressure) because the additional blood vessels in their adipose tissue increase their total blood vessel length. Resistance to blood flow through a vessel is directly proportional to the length of the blood vessel. The longer a blood vessel, the greater is the resistance. An estimated 650 km (about 400 miles) of additional blood vessels develop for each extra kilogram (2.2 lb) of fat.²⁶

CONCLUSION

In the current situation despite taking modern medicine patients with hypertension increasing drastically. In the contemporary situation, everyone is looking towards *Ayurveda* in a search of ideal and safe treatment. Hence, getting the perfect management of hypertension without any side effects is a need of the present era. In the *Ayurveda* equilibrium of *Doshas*, *Dhatus*, *Malas* and *Agni* are considered as a healthy state of an individual. In nutshell, we can say that while observing hypertension through *Ayurvedic* spectacle one or more of the following three possibilities should be considered. 1. *Pathophysiological* changes in the form of vitiation of *Dosha* (*Vata*, *Pitta* and *Kapha*), *Dhatu* and *Mala Dushti*. 2. *Psychological* changes i.e. disturbances at the level of *Mana* (*Manovaha Strotas Vikara*). 3. Structural changes as complications of long-term hypertension on various organs like heart, blood vessels, kidney etc. After a thorough study of literature and fundamentals in both *Ayurveda* and *Modern* medicine, it is concluded that *the Ayurvedic* approach to treat disease according to its *Samprapti* (pathogenesis) is very practical and should not be overlooked. This review of hypertension showed that the disease can be well managed by following *Pathya Apathyaas* mentioned in *Ayurveda* (avoidance of the etiological factor). Considering the detailed conceptual part, we can say that *Ayurveda* describes the appropriate lifestyle and diet management called *Aahar* and *Vihar* for maintaining homeostasis and thereby preventing hypertension. Proper

medication as per *Ayurvedic* guidelines (along with proper Aahar, Vihar and Yoga) will control blood pressure without any untoward effects. An additional benefit of *Ayurvedic* management is the absence of hazardous effects which is very important given the global acceptance of *Ayurveda*.

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