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HYPERTENSION: AN AYURVEDIC PERSPECTIVE & ITS MANAGEMENT (Review Article)

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ABSTRACT

Hypertension is commonest chronic non communicable disorder found all over world. It is also called as silent killer because in its patients remain mostly asymptomatic but on the other hand it causes target organ damage; it is also a major risk factor for Coronary vascular diseases like Stroke and myocardial infarction. It is a global health problem affecting the people of different ethnicity & ages around the world. In modern medicine the aim of the treatment for hypertension is to prevent the risk of coronary heart disease & cardiovascular disease. Though a lot of potent antihypertensive drugs are available today in modern medicine, but none of them is free from side effects. Hypertension is not mentioned in Ayurvedic text as it is, but on the basis of Ayurvedic principle we can understand the *Samaprapti* (etiopathogenesis) of Hypertension & according to that we can treat the disease. Improper food habits and modern sedentary lifestyle with or without genetic predisposition provokes and vitiates all the *Tridoshas* to trigger the pathogenesis of hypertension. Thinking about the disease the main causative factor is vitiating *Vata* it may be only *Vata* or in combination with *Pitta* or *Kapha* . According to etiology we can treat the disease in two ways either by *Shamana Chikitsa* (only medicine) or by *Shodhana Chikitsa* (purificatory procedures). This article explains the Ayurvedic view of hypertension which will help in diagnosis as well as its proper management .

Keywords: Hypertension, Ayurveda ,Blood pressure, High Blood pressure

Introduction

India is the second most populous country in the world and emerging burden of the cardiovascular deaths (CVD) in the country is alarming¹. In 1990 CVD accounted for 20 % of all deaths in this region². Out of these coronary heart disease 60 % and stroke 40 % were responsible for it ². Currently 30% of all deaths that is almost 20 lakhs , are annually caused by CVD in India^{1,3,4}. High blood pressure or hypertension is among the major risk factors for increasing CVD in India³. The man of 21st century is breathing under various stresses, strain, anxiety and irregular and unnatural food habits. This type of life style produced a lot of hazards also, in the form of different type of psychophysiological disturbance. Hypertension is one of the common complaints of them. It is one of the major risk factor for the development of cardiovascular morbidity and mortality.

Ayurveda has no direct reference of blood pressure or hypertension in its classics. However According to involvement of *dosha*, *dushya*, *srotas* and symptoms it is co-related by many scholar

with *raktagata vata*, *siragata vata*, *rakta vridhhi*, *vyan avrita vata*, *dhamanipratichaya*, *raktavata* etc. According to Acharya Charaka , in case of an unknown disease, the physician should try to understand the nature of the disease through *Dosha*, the site of manifestation, etiological factors and then should initiate the treatment⁶,Hence it becomes necessary to study multiple factors viz. *Dosha Vruddhi*, *Dhatu Dushti*, *Srotas* involved and their role in causation of hypertension for proper understanding of disease, its prevention and treatment.

Hypertension : Modern view⁷

Hypertension or high blood pressure is an asymptomatic medical condition in which systemic arterial blood pressure elevated beyond the normal values. Person's Blood pressure may be different at different times of the day. High blood pressure can strain to the heart and damage arterial blood vessels, and increases the risk of congestive heart failure, myocardial infarction, pulmonary embolism, cerebral aneurysm and kidney failure, and even lead to death.

Classification of Hypertension :⁷

Category	Systolic (mm of hg)	Diastolic (mm of hg)
Normal	< 130	<85
High normal	130 -139	85 -89
Hypertension		
Stage 1 HTN (mild)	140 - 159	90 - 99
Stage 2 HTN (moderate)	160 - 179	100 - 109
Stage 3 HTN (severe)	180 - 209	110 - 119
Stage 4 HTN(very severe)	> 210	> 120

Types of Hypertension :-

Medical science recognizes two types of hypertension –

1. Primary hypertension and
2. Secondary hypertension.

Primary hypertension -

It is also called as Essential hypertension or idiopathic hypertension. There are no known cause, however many of the lifestyle factors contribute to this condition. About 90–95% of cases of hypertension are categorized as primary hypertension with no obvious underlying cause. This is found in most of people who have crossed the middle age. It cannot be permanently cured, but it controlled with the proper drugs and measures. The measures include sharp reduction of obesity and reduction of dietary salt.

Following factors are important in the etiology of essential hypertension:

- ° Hereditary factor
- ° Environmental factor- overcrowding, pollution, competition in job.
- ° Age and sex factor
- ° Habit of Alcohol and smoking
- ° Increase in lipid profile and serum cholesterol
- ° Obesity
- ° Psycho-social factors- anxiety, tension.
- ° Dietary factor- more salt intake.

Secondary hypertension -

When hypertension is caused by another condition or disease process, it is called secondary hypertension. Incidence of the Secondary hypertension is comparatively very low. This is very danger and need to treat urgently. Fewer than 10% of patients have secondary

hypertension. The possible causes of secondary hypertension may be such as-

- ° Due to administration of certain drugs like contraceptive pills, steroids etc
- ° Hypertensive diseases of pregnancy: Toxemias of pregnancy
- ° Renal causes: Acute nephritic syndrome, chronic nephritis and polycystic kidney.
- ° Endocrinal causes: Thyrotoxicosis , Myxedema and Acromegaly.
- ° Metabolic causes: Diabetes mellitus, chronic gout and atherosclerosis.
- ° Congenital diseases: Coarctation of aorta
- ° Collagenosis and miscellaneous diseases: SLE and polyarteritis nodes.
- ° Neurological: Encephalitis, brain tumor and cerebrovascular accidents
- ° Blood diseases: Polycythemia etc.

Hypertension : Ayurvedic view

In *Ayurveda* there is no description of such a single disease which can resemble with hypertension. As per *Ayurvedic* principles, in case of unknown disease, the physician should try to understand the nature of the disease through *Dosha*, the site of manifestation, etiological factors and then should initiate the treatment⁸. Hence it becomes necessary to study multiple factors viz. *Dosha Vruddhi*, *Dhatu Dushti*, *Strotas* involved and their role in causation of hypertension for proper understanding of disease, its prevention and treatment.⁸ Various *Ayurvedic* scholars have coined different names for hypertension such as: *Raktagata Vata*, *Siragata Vata*, *Avrita Vata*, *Dhamani Prapurana*, *Rakta Vikshepa*, *Vyana*

Prakopa, Raktamada, Uchharaktachapa, Vyana Atibala etc.⁹

According to Ayurveda, high blood pressure involves all three *Doshas*, the heart, and the blood vessels. In high blood pressure we can see signs and symptoms of disturbance of *Vata dosha*. *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**'⁸

Factors involved in hypertension:¹⁰

Dosha:

1) **Prana Vayu:**¹⁰

Prana vayu mainly situated in brain (medulla), vasomotor center controls the blood pressure by the vasoconstrictor and vasodilator nerves; similarly, *Prana vayu* also controls the regulation of blood pressure by controlling *Vyana vayu* which has been believed to function like constriction – dilatation of the vessels. So, any pathology of *Prana vayu* can cause abnormality of heart as well as vessels

2) **Vyana Vayu:**¹⁰

Vyan Vayu is said to be responsible for various kinds of movements in the body. With the help of *Vyan Vayu*, heart contracts and circulates the blood (*Rasa Rata Dhatu*) continuously all over the body. The contraction and dilatation of the vessels are also governed by *Vyana vayu* through the heart. So, it suggests the involvement of *Vyana vayu* on regulation of blood pressure. Erotic desire, grief and anger causes *vataprakopa*, these factors

stimulate adrenergic secretions thus causing vasoconstriction resulting in hypertension. *Vataprakopa* due to any cause can result in hypertension.

3) **Samana Vayu:**¹⁰

According to *Sharangadhara* after the digestion process '*Samana*' helps in the transportation of *Rasa* in to the heart and from heart it circulates in the whole body. Therefore, conclusion can be made that *Samana* may have an important role in the circulation.

4) **Apana Vayu:**¹⁰

Mutra and *Purisha* have been considered as *Mala* in *Ayurveda*, which can produce disease if not excreted at regular intervals. It is clear that there is some effect of excretion of *Mutra* on regulation of the body fluid. Vitiation of *Apana Vayu* hampers the excretion of the *Mutra*, so the body fluid level becomes imbalanced, which may affect the maintenance of normal blood pressure. From the above fact it can be concluded that *Apana Vayu* also plays a role in regulation of normal blood pressure.

5) **Sadhaka Pitta:**¹⁰

It is difficult to explain *Sadhaka pitta* in terms of modern physiology; however functions of adrenaline do possess some similarity with that of *Sadhaka Pitta*. In cases of fear, anger and such other feelings, the adrenal gland is stimulated and increases the secretion of adrenaline; which in turn affects the heart rate and cardiac output, and ultimately raises the blood pressure. Thus, *Sadhaka Pitta* can be considered as an important factor in the normal physiology of blood pressure.

6) **Avalambaka Kapha:**¹⁰

The normal rhythmicity, conductivity, excitability, contractility, tone and refractory period of cardiac muscles can be correlated with *Avalambana Karma* of *Hridaya* by *Avalambaka Kapha*. In circulatory system *Rakta*, *Rasa* and *Sanjnya* are the common entities which circulate all over the body and *Doshas* vitiate in their *Srotasas* after particular *Nidana Sevana* to manifest *Mada*, *Murchha* and *Sannyasa* Thus, it keeps heart in a healthy state and enhances its working capacity of continuous pumping action. Therefore, it can be said that *Avalambaka kapha* has some role on regulation of blood pressure.

Dushya: ¹⁰

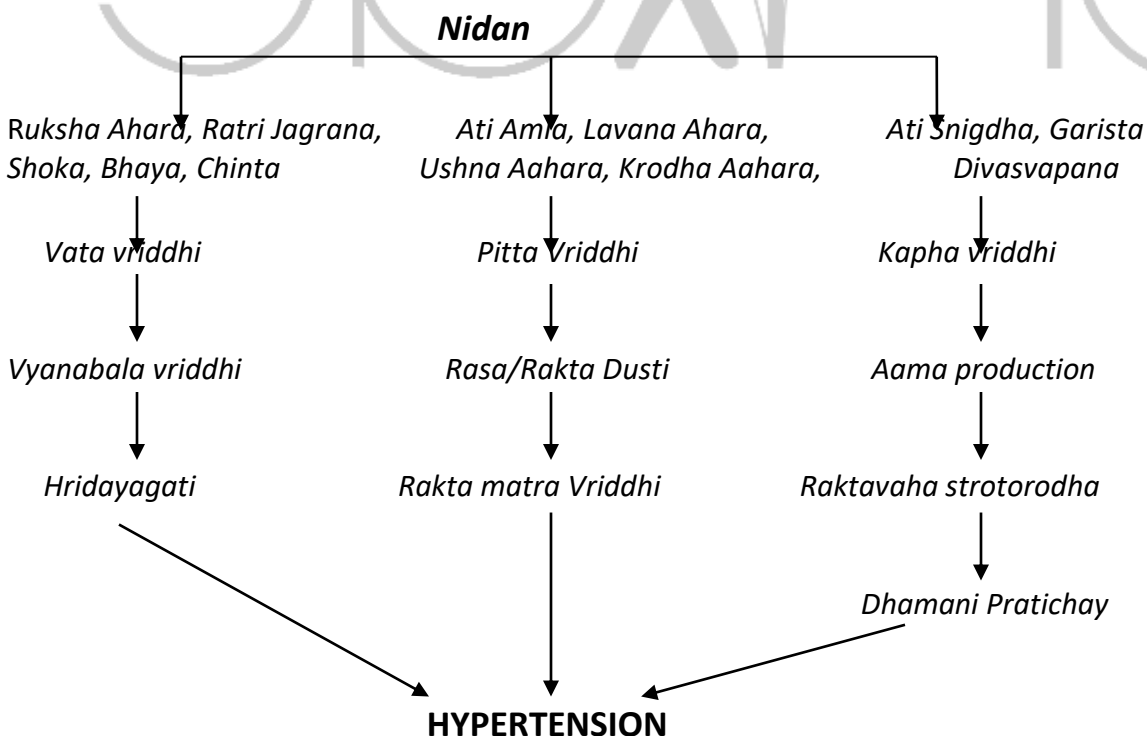
In circulatory system *Rakta*, *Rasa* and *Sanjnya* are the common entities which circulate all over the body and *Doshas* vitiate in their *Srotasas* after particular

Nidana Sevana to manifest *Mada*, *Murchha* and *Sannyasa* which are the complications of essential hypertension. Some scholars also opined that *Meda* is also one of the factor which gets vitiated in EHT but this fact is not supported by other scholars. Therefore it can be concluded that in essential hypertension *Rasa*, *Rakta* and *Manas* are the important factors.

Clinical features:-¹¹

General symptoms of hypertension are -
 Headache (*Shiroruka*), insomnia (*Anidra*), fatigue (*Klama*), irritability (*Krodha Prachurya*), anxiety complex *Buddhi Sammoha*, *Arti*, *Mad Santap*, sub-conjunctival / retinal hemorrhage (*Akshiraaga*), drowsiness (*Tandra*), anorexia complex (*Agnisad*, *Aruchi*). All these symptoms are similar to *Rakta Pradosaja Vikara*

SAMPRAPTI (PATHOGENESIS OF HYPERTENSION IN AYURVEDA):¹⁰



Samprapti Ghataka (Factors in pathogenesis): -

- Doshā -Vata (Prana, Vyana) -Pitta (Sadhaka) –Kapha (Avalambaka)
- Dushya -Rasa, Rakta, Manas
- Agni -Jatharagni Mandya Janita Aama, -Rasa, Rakta Dhatvagni JanitaAama
- Strotasa -Rasavaha, Raktavaha, Manovaha
- Strotodusti-Sanga
- Udbhavasthana-Aamashaya
- Roga Marga -Koshta, Shakha and Marmagata
- Sancharisthana –Sarwang Sharira
- Vyaktasthana – Sarwang Sharira
- Adhisthana -Dhamani, Sira, Sarwang Sharira
- Vyadhi Swabhava-Aashukari/Chirakari

Principles of management -¹¹

In present era, today's life style has led to increases the incidence of many diseases. Hypertension is one of the most common hemodynamic diseases and still stands as a challenge to different medical systems. Many research works have been done on hypertension in modern medical science but no drug has yet been claimed to cure hypertension completely without any side effect. Ayurvedic principles of diet and living pattern (Ahara-Vihara, Dincharya, Ritucharya) and codes of conduct (Achararasayana) that are effective in prevention of many disease. Hypertension can be better managed by the Ayurvedic principles of management namely:

1. Nidana Parivarjana
2. Shodhana (Panchakarma therapy)
3. Shamana

1) Nidan Parivarjana -¹¹

In Nidan Parivarjana, avoiding the aetiological & risk factors which cause

vitiating of Tridosha especially Vata and Pitta Doshā. Nidana Parivarjana stops the further progression of the disease, by restricting vitiating of Doshas.

2) Shodhana (Panchakarma) therapy-¹¹

Shodhana means purification of the body by eliminating morbid Doshas and Dushyas from body through Panchakarma. It is one of the important treatments of Ayurveda which deals mainly with elimination of the aggravated Doshas from the body. According To Acharya Charaka, Chikitsa of Raktaja Rogas are Virechana, Raktavishravana, Upvasa and Rakta and Pitta Shamak Chikitsa . Basti, Nasya and Shirodhara are also beneficial in hypertension

Mode Of Action Of Virechana In Hypertension -

According to Acharya Charaka, Virechana is indicated in Raktaja Rogas. As Virechana is best treatment for Pitta Doshā and Pitta Doshā has Rakta like similarity, so Virechana is highly beneficial for Raktaja Rogas. On the other hand, hypertension is Vata and Pitta dominant Tridoshja Vyadhi and Virechana is also beneficial for both Vata and Pitta Doshā.

Mode Of Action Of Basti In Hypertension -

All the Acharyas have appreciated Basti as a unique form of treatment modality for Vata and other Doshas too because it expels the vitiating Doshas rapidly as well as it nourishes the body. The possible role of Kapha and Meda as Avarana over Vyan Vayu in hypertension

justifies the application of *Lekhan Basti* etc to pacify them.

● **Mode Of Action Of Shirodhara In Hypertension -**

In *ayurveda*, *shirodhara* is a very important therapy in which continuous and rhythmically pouring of liquid lead to state of concentration and enhance the release of serotonin and produces chemical substance like acetylcholine and small amount of acetylcholine causes fall of blood pressure. *Shirodhara* is also help in mental exhaustion as well as relieving stress and any ill effects on the central nervous system and pacifies the aggravated *Vata Dosha* in *Shira* which helps in relaxing the nervous system and balancing the *Prana Vayu* and *Vyan Vayu* around the head and *Vyan Vayu* itself responsible for circulation of blood in the body, so we can say that *Shirodhara* is quite effective for hypertension.

3) **Samana therapy -7**

The principle of *Shaman* therapy is to normalize and maintain the equilibrium of all the *Doshas*.

a. **Single Drugs -**

Sarpagandha, *Ashwagandha*, *Jatamamsi*, *Brahmi*, *Shankhapushpi*, *Lasun*, *Mandookparni*, *Yashtimadhu*, *Arjuna twaka* etc drugs are generally administered in the form of *Churna* (powder), *Swarasa* (juice), *Kwatha* (decoction) and *Sita kashaya*.

b. **Compound Drugs -**

◦ **Churna:** *Sarpagandha Churna*, *Ashwagandha Churna*, *Shatavari Churna*, *Yashtimadhu Churna*, *Arjuna Twak Churna*, *Jatamansi churna*

◦ **Avaleha :** *Brahmi Rasayana*

◦ **Vati:** *Brahmi Vati*, *Sarpagandha Ghana Vati*, *Mukta Vati*

◦ **Rasoushadhi:** *Chintamani Chaturmukh Rasa*, *Rasaraja Rasa*

◦ **Asava-Arishta:** *Saraswatarishta*, *Ashwagandharishta*, *Arjunarishta*, *Punarnavaasava*.

◦ **Pishti:** *Mukta Pisti*, *Praval Pishti*, *Jaharmohara Khatai Pishti*

◦ **Bhasma:** *Mukta Bhasma*

◦ **Taila:** *Himsagar Taila*, *Brahmi Taila*

4) **Life Style Modifications-7**

- Weight reduction
- Regular physical exercise, daily brisk walking for half an hour
- Well-timed sleeping and awakening
- Regular practice of Yoga and Meditation like Pranayam (kumbhak)
- Avoid intake of oily, salty, sour and spicy food
- Intake of balanced diet, more use of fruits and green Vegetables in diet
- In diet more use of wheat, Barley, Sorghum, green gram, horse gram, Bitter gourd, Bottle gourd, Turnip, Carrot, Radish, Indian gooseberry, Cucumber, Black grapes, Pomegranate, Apple, Pineapple, milk etc.

CONCLUSION:

Hypertension is a lifestyle disorder. It is treated with changes in our lifestyle and medicines. In modern science there are various anti hypertensive allopathic drugs are available for the control of blood pressure. These anti hypertensive drugs can help to control blood pressure, but it will not cure permanently high blood pressure. When we stop treatment, our blood pressure and it related health problems will be rise. So, for a healthy future, everyone have to follow the *Ayurveda* treatment

about the hypertension. Ayurveda has an upper edge in treating the hypertension with emphasis on its root cause, where modern medicine is so entrenched in its pharmaceutical based symptoms treatment. Ayurveda approach to treat every disease according to its *Samprapti* (pathogenesis) and it is very practical. This review about the hypertension indicates that the proper medications as per Ayurveda guidelines will help to control blood pressure without any hazardous side effects. Hypertension can also be managed well by following of *Pathya* and *Apathya* as *Aahar - Vihar* (diet management and appropriate lifestyle) and *Yoga* mentioned in Ayurveda. These help to maintain homeostasis of human body and thereby preventing the hypertension.

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