

REVIEW ARTICLE

Understanding Essential Hypertension through Ayurveda – A Review

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ABSTRACT

Hypertension is called a silent killer because it rarely provides symptoms before it damages the heart, brain or kidney. It is an important public health challenge in both economically developing and developed countries. *Ayurvedic* texts don't provide any direct reference regarding essential hypertension (EHT), but the disease can be explained on the base of *Ayurvedic* principles viz. *Dosha*, *Dushya*, *Srotas* etc. The present study was undertaken to evaluate the factors responsible EHT along with its *Samprapti* as per *Ayurvedic* line of thinking and to explain the disease in terms of *Ayurveda*. It was found that EHT is a psychosomatic and *Tridoshaja* disease having the dominancy of *Vata Dosha*. It is mainly a disease of *Raktavaha Srotas* in which *Rasa*, *Rakta* and *Manas* are the *Pradhan Dushyas*.

Key words: Essential hypertension, *Ayurveda*, *Dosha*, *Rakta*.

INTRODUCTION

Hypertension is called a silent killer because it rarely provides symptoms before it damages the heart, brain or kidney.^[1] It is estimated that 600 million people are affected worldwide with hypertension. By the year 2025, approximately 1 in 3 adults aged over 20 years, totally 1.56 billion people worldwide, will have hypertension.^[2] The disease essential hypertension (EHT) is neither denoted in *Samhita* nor in any *Samgraha granthas*. The term hypertension was coined after the invention of sphygmomanometer, however before that about its existence, one can trace the pathway on the tract of symptomatology.

Ayurveda is such a science which has specific principles on the basis of which it has developed. Its diagnostic approach is based on the involvement of *Dosha*, *Dushya*, *Srotas* etc. for particular disease. There is no any disease in *Ayurveda* which completely resembles with hypertension but under certain headings the nomenclature is possible by taking the support of sign and symptoms.

Many scholars have tried to give the appropriate answer to the disease but still no theory is complete and acceptable. Most of the scholars have explained plenty of theories which are based on a single angle of thinking like *Siragta Vata*^[3] *Raktagata Vata*^[4], *Avritta Vataroga*^[5], etc., but hypertension can't be correlated completely with above mentioned diseases. So, it is a great problem to find a disease similar to hypertension in *Ayurveda*.

AIMS AND OBJECTIVES:

1. To find out the factors involved in hypertension as per *Ayurvedic* line of thinking
2. To explain disease hypertension in terms of *Ayurveda*

LITERATURE REVIEW:**Historical review:**

There are many references in ancient texts about hemodynamic system including *Hriday* (heart), *Sira* and *Dhamani* (blood vessels) which are commonly affected by the high blood pressure. In

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Rigveda references indicating the knowledge of *Hridaya* are present. [6] In *Samhita*, references concerned to *Hridaya*, *Sira* and *Dhamani* are found. [7] According to *Charaka* ‘*Vikshepana*’ (circulation) of *Rasa Dhatu* is the Karma of *Vyan Vayu* [8] and *Hridaya*. [9] Further *Sushruta* has described the circulation process in detail. [10]

Chakrapani opined that circulation is a continuous process and during the circulation with *Rasa Dhatu*, *Rakta* and other liquid *Dhatus* also circulate all over the body. [11]

As the science advanced the *Ayurvedic* scholars also tried to find out the cause and the name of the disease – hypertension.

Some of them are: [12]

Concept	Name of the scholars	Year
<i>Dhamani Prapurana</i>	Saraswati G.N.	1935
<i>Raktagata Vata</i>	Upadhyaya Y.N.	1950
<i>Siragata Vata</i>	Chaturvedi G.N.	1962
<i>Avritta Vataroga</i>	Sharma R.K.	1966
<i>Vyana Bala</i>	Triguna B.	1974
<i>Dhamani Praticay</i>	Athawale A.D.	1977
<i>Raktavata</i>	Sharma P.V.	1993

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 treatment. [13] So, it becomes necessary to study the factors which are involved in hypertension.

Factors involved in essential hypertension:

Dosha:

Prana Vayu:

In modern science, the functions of nervous system have been described similar to description of the *Prakrita Prana vayu*. ‘*Hridayadrika*’ function of *Prana vayu* can be correlated with the heart rate controlling function of brain originated nerves. [14] Furthermore, in spite of 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.

Vyana Vayu:

Vyan Vayu is said to be responsible for various kinds of movements in the body. [15] 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.

Samana Vayu:

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. [16] Therefore, conclusion can be made that *Samana* may have an important role in the circulation.

Apana Vayu:

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. Vitiating 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.

Sadhaka Pitta:

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*. [17] 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.

Avalambaka Kapha:

The normal rhythmicity, conductivity, excitability, contractility, tone and refractory period of cardiac muscles can be correlated with *Avalambana karma* of *Hridaya* by *Avalambaka kapha*. [18] 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:

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* [19] 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 *Rakta*, *Rasa* and *Manas* are the important factors.

Agni:

The *Agni* is the important factor in the pathogenesis of all the diseases. In EHT the *Agni* vitiation is occurring at 2 levels

(1) *Jatharagni Mandya*

(2) *Dhatwagni Mandya - Rakta Dhatu*

The psychological factors interfere in the digestive power of *Agni* along with the *Atimatrashana* (excessive diet), *Viruddhashana* (intake of food having opposite properties), *Adhyashana* (intake before the digestion of previous food) which are the main culprits found in EHT.

Manas:

Hypertension is considered as a psychosomatic disorder also. In *Ayurveda Prajnaparadha* and *Asatmyaindriyartha samyoga* are consider as the root causes for every disease, which indicate the involvement of psyche. *Manas Bhavas* like *Chinta* (worry), *Krodha* (anger), *Bhaya* (fear) etc. play an important role in the etiopathogenesis, progression and prognosis of disease as well as response to the treatment of the disease – hypertension. [20] This fact reveals that *Manas* is also involved in EHT and the disease should be considered as psychosomatic.

Srotas:

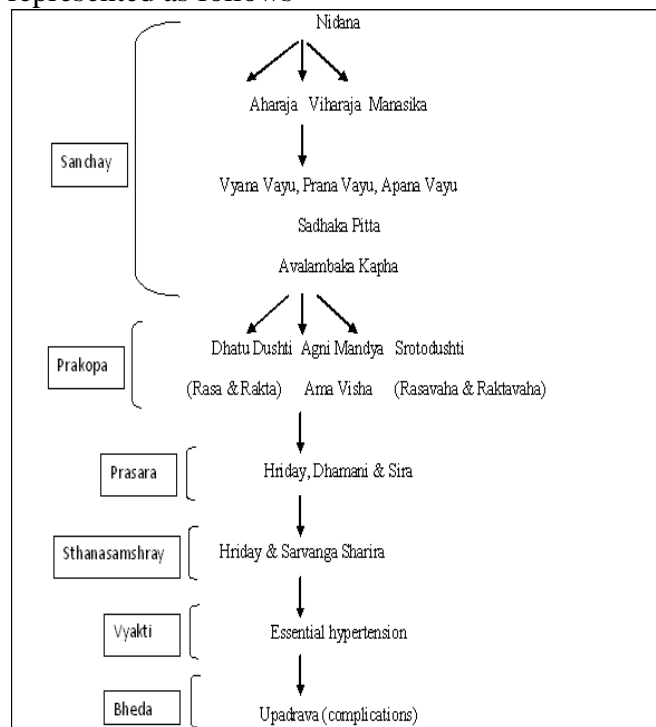
In the context of blood pressure *Rasavaha* and *Raktavaha Srotasas* are important as they are related with ‘*Rasa-Rata Samvahana*’. Also essential hypertension is a psychosomatic disorder, so role of *Manas* is also very important in this case. Hence, it can be said that *Rasavaha*, *Ratavaha* and *Manovaha* are the *Srotasas* which are affected in hypertension.

SAMPRAPTI (PATHOGENESIS OF HYPERTENSION IN AYURVEDA):

The pathogenesis of hypertension takes place at both physical and psychic level one at a time or simultaneously depending upon the *Dosha Dushya Sammurchhana*. At physical level, due to etiological factors, the *Vata Pradhana Tridosha* gets vitiated. Simultaneously due to the *Dhatuvaishamyakara* properties of etiological factors, *Agnidushti*, *Dhatudushti (Rasa and Rakta)* and *Ama* production occurs leading to *Khavaigunya*. The *Ama* production results into *Strotorodha (Rasvaha and Ratavaha)* and thus blocks the normal circulation of *Vyana Vayu* resulting into *Margavarodha*. This obstructed *Vyana Vayu* leads to forcible blood flow in the

blood vessels causing increased resistance. This further guides the already vitiated *Doshas* to get aggravated and produce symptoms of hypertension.

The above said *Samprapti* is schematically represented as follows



Samprapti Ghataka (Factors in pathogenesis):

- *Dosha* - *Vata (Prana, Vyana, Apana)*
- *Pitta (Sadhaka)*
- *Kapha (Avalambaka)*
- *Dushya* - *Rasa, Rakta, Manas*
- *Agni* - *Jatharagni Mandhya*
- Janita Ama,* - *Rasa, Rakta Dhatvagni*
- Janita Ama*
- *Srotasa* - *Rasavaha, Raktavaha, Manovaha*
- *Srotodusti* - *Sanga, Vimarga Gamana*
- *Udbhavasthana* - *Aamashaya*
- *Roga Marga* - *Kostha, Shakha and Marmagata*
- *Sancharisthana* - *Sarwang Sharira*
- *Vyaktasthana* - *Sarwang Sharira*
- *Adhisthana* - *Dhamani, Sira, Sarwang Sharira*
- *Vyadhi Swabhava* - *Aashukari/Chirakari*

CO-RELATION WITH AYURVEDIC DISEASES:

EHT can be co-related with many diseases mentioned earlier. Comparison of these diseases on the basis of symptomatology is given as below:

Raktagata Vata: [21]

The symptoms like *Santapa* (irritability), *Aruchi* (anorexia), *Bhrama* (giddiness) are found commonly in *Raktagata Vata* and EHT

Siragata Vata: [22]

The symptoms of *Siragata Vata* like *Manda shotha* (mild oedema), *Sira Purnata* (increased volume in blood vessels) and *Sira Spandan* (increased pulsation in the blood vessels) etc. can be correlated with EHT

Raktavridhhi: [23]

The symptoms of *Raktavridhhi* like *Raktapitta* (bleeding disorders), *Tamapravesha* (fainting), *Raktanetra* (redness of eyes), and *Sirapurnata* are found identical with EHT.

Avritta Vata: [24]

The symptoms of *Pittavritta Vata* viz. *Daha* (burning sensation), *Bhrama*, *Tama* etc. are said to be present in EHT. *Bhrama*, *Avasada* (exhaust), *Daurbalya* (fatigue) etc. symptoms of *Pittavritta Udana* and *Shwasa* (dyspnoea), *Hridroga* (cardiac disorder) etc. symptoms of *Pranavritta Udana* are found similar to EHT. Furthermore the symptoms like *Shotha* and *mandala* are also said to be present in EHT.

Raktashrita Vikara:

The list of *Ratkashrita Vikaras* quoted at *Vidhisonitiya Adhyaya* of *Charaka Samhita* consists 41 diseases. If one concentrates on these symptoms the surprising similarity between the symptoms of EHT and *Ratkashrita vikaras* can be observed. Sinking

This can be grouped as follows

S. No	Symptoms of <i>Raktadushti</i>	Symptoms of EHT
1	<i>Shirashula</i>	Headache
2	<i>Tamodarshana</i>	Fainting / Blackouts
3	<i>Tandra</i>	Drowsiness
4	<i>Gurugatrata</i>	Fatigue
5	<i>Atidaurbalya</i>	
6	<i>Klama</i>	
7	<i>Krodhprachurata</i>	Anger
8	<i>Buddhisammoha</i>	Decreased memory power
9	<i>Mada</i>	Irritability
10	<i>Santapa</i>	
11	<i>Agnisada</i>	
12	<i>Aruchi</i>	Anorexia
13	<i>Tiktamlodgara</i>	
14	<i>Akshiraga</i>	Retinal hemorrhage
15	<i>Pramilaka</i>	Blurring vision

CONCLUSION

Hypertension is mainly a Tridoshaja Vyadhi having the dominancy of Vata Dosha.

Rasa, Rakta and Manas are the chief Dushyas of the disease.

It is primarily a disease of Raktavaha Srotas.

The disease essential hypertension mostly co-relates with the Raktashrita vikaras.

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