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Review Article

### Concept of essential hypertension in Ayurvedic perspectives

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#### ABSTRACT

Essential hypertension is an instrumental disease which is the recent diagnostic invention of modern science. However there is no any reference which directly resembles with its pathophysiological views in Ayurvedic classics. Lots of works have been carried out on concept of hypertension to evaluate the perfect diagnosis and mode of treatment on the basis of Ayurvedic principles, but a widely acceptable theory is still not available. Different nomenclatures also have been adopted by Ayurvedic researchers like *Rakta pradoshaj Vyadhi*, *Uchharaktachapa* and *Uchharaktabhara* etc. on the basis of pathophysiology and symptoms of disease. Different diseases were considered parallels to hypertension such as; *Raktagata Vata*, *Raktavrita Vata*, *Pranavrita Vyana*, *Vyanavrita Prana* and *Shleshmavrita Vyana* etc. Ayurveda believe that pathophysiology of other diseases routes through hypertension.

**Keywords:** *Ayurveda*, *hypertension*, *Rakta pradoshaj Vyadhi*, *Raktagata Vata* and *Raktavrita Vata*.

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#### INTRODUCTION

Ayurveda the science of medical system evolved globally emphasizes on the way of physical and mental fitness along with preservation of health status. This ancient science developed from extra-sensory logic of our great seers and knowledge which is acceptable globally till date. Ayurveda encompasses various ideas related to the health issue of mankind. These ideas established on the basis of high quality research. The well planned research can help ayurveda science to achieve its generosity all over the globe<sup>1-4</sup>.

Prevalence of disease and death are the common fundamental attributes of human life. The analysis of these along with the search to find out the possible remedies remained always part of human development. Hypertension is common, asymptomatic, readily detectable, usually easily treatable, and often leads to lethal complication if left untreated. This may be the most important factor responsible for the cardio vascular mortality. Essential hypertension (EHT) is one of those disastrous diseases which are psychosomatic, hereditary and occurring as a result of aging. It is also called a silent or hidden killer because of its asymptomatic nature and dreadful effects. Hypertension is a major risk factor for the development of cardiovascular disease (CVD). Its impact is greatest on stroke

and end stage is renal failure. It is also one of the contributing factors for the development of coronary artery disease (CAD). According to Allopathic science of medicine hypertension never be cure but only controlled with the help of Antihypertensive drugs. So in this condition patients of hypertension have to take the drug for a life time. On the other hand antihypertensive drugs may cause so many side effects to the patient. Therefore it is a great need of today to find out such type of herbal remedy which may control hypertension without creating any complication<sup>3-8</sup>.

#### CONCEPTIVE STUDY

Ayurveda not described any disease which can be resembles with hypertension but under certain headings the nomenclature is possible by taking the support of signs and symptoms. *Raktapradoshaja Vikaras* may be correlated with hypertension on the basis of sign & symptoms since it possesses symptoms like; *Shirahashoola*, *Bhrama*, *Anidra*, *Santapa*, *Mada*, *Murchha* and *Sanyasa*.

Ayurveda scholars also tried to explain hypertension on the basis of Ayurvedic principles adopting literal translation of hypertension as *Raktachapa*, *Raktadaba* and *Raktavegavridhi* etc. However *Raktavrita Vata*, *Shleshmavrita Vata* and *Raktagata Vata* also taken in consideration on the basis of aetiopathogenesis.

*Acharya Charak* has given a guideline to understand a new clinical entity not described by him in the *Samhita*. *Acharya Charak* narrates as a physician should not be puzzled while coming across a new clinical entity as it is not necessary that each and every disease should have nomenclature. That if a physician is unable to diagnose the disease, he should diagnose and treat the unknown disease by its *Prakruti*, *Samuthan* and *Adhishtan*. *Acharya Charak* designed a treatment protocol for such disease; by ruling out vitiated *Dosha* out of *Tridoshas* and *Nidan* factors. Therefore with the help of symptomatology root of disease symptoms like *Shirahshool* (Headache), *Bhrama* (Giddines), *Hridhravatva* (Palpitation) and *Anidra* (Insomnia) etc. are generally considered as part of essential hypertension. These symptoms and basic *Nidan panchak* help to understand psychosomatic disorder. Thus on the basis of glimpse of previous research works and concluded thoughts of different schools it can be said that hypertension is '*Vata Pradhan Tridoshaja Vyadhi*', influenced by morbid state of *Mana*, therefore be considered as *Sharir* and *Manas Roga*.

Modern science also affirms this fact; *Sharir* and *Satva* (*Mana*) have been designated as the habitats of *vyadhi* by *Acharya Charaka*. Prior to tracing the details regarding the etiopathogenesis of any disease, it is mandatory to have thorough knowledge of physiology of the concerned organs and organ systems. This was an approach of *Charaka* in *Vata vyadhi* and *Grahani*. In this way, better understanding of *Samprapti* is possible and it can be explained in terms of altered physiology.

*Pachakagni*, *jatharagni*, *antaragni*, *koshtagni*, *kayagni* and *dehagni* are loosely said as the synonyms of *Pachak Pitta*. The human body is the outcome of consumed food. The health of an individual is dependent on not only the nutrients of the body, but also the proper digestion and assimilation of them. The importance of the *Pachak Pitta* (*Agni*) is emphasized by the statement that every disease is due to impaired/hypo function of this factor. Therefore *Kayachikista* has also been defined as *Antaragni chikista*. The digestion of food is possible only when it comes in contact with *Pachakapitta* (Ch.Sha.6-15) in *annavahasrotas*. Entry of food into *Annavahasrotas* is facilitated by *Prana* & *Samana Vayu* (Ch.Sha.6-15). *Annapraveshakriya* represented by the swallowing reflex is the function of *pranavayu*, the function being easily appreciated in various degrees of *Aruchi* like; *arochak*, *abhaktachhand*, *asyavairasya*, *annabhilasha* etc. After the food enters *annanadis-oesophagus*, the further movement of food is taken over the *samanavata* through the collective movements of *koshta* and *aaharparinamkara bhava*. *Jathargni* converts *aahara* into *aahar rasa* which travellers via *Pratihariand Rasaprapa* to *Hridaya* (heart) from where it is propelled into the system by the *Vyanavayu* as the basic nutrition (Su.su.14/3, Bhela su. 21/2).

Besides, *Vata* is concerned with *gati* (motor) and *ghandan* (sensory) functions of the body. All movements are affected through the contraction and relaxation of the muscles. The *vyana vata*, a subdivision of *vayu* control the voluntary movements of the body. According to *Vaghabhata* the *Vyana* is located in *Hridaya*, but travels throughout the body (A.S.SU.20/4). The *Gati* of *Rasa dhatu* against gravitation is because of *Vayu* only (A.H.Su.12/6-7).

When *Vyan vayu* combine with *Rasa dhatu* it exerts pressure on the walls of the *Rohini* (*Dhamani* or artery) which causes continuous supply and movement of *Rasa dhatu* (Su. Su.14/13). According to *Susruta* the function of *Vyana Vayu* is effective transport, circulation of *Rasa dhatu* or *aahararasa* in the body, circulation of blood and sweat from

the body. There are different types of movement's mentioned in Ayurveda classic for the functioning of *Vayu* such as; extension (*prasarna*), contraction (*aakunchana*), bending (*vinamana*), up-word movement (*unnamana*) and lateral movement (*tiryaggamana*) (Su.Ni.1/17-18.Dhalana).

Circulation of *Rasa dhatu* and other *dravadhatus* like *Rakta* offers nourishment to the body since the body is made up of judicious admixture of seven *dhatu*s (Su. Su. 15/5). The circulation is effected by the force of the regular contraction of the heart. Therefore proper nourishment of the body by the *Rasa* is entirely dependent on the function of the heart. Elasticity of arterial wall regains its position after pressure and forward movement of the *Rasadhatu* to other *dhatu*. This is the normal *Rasa Samhavahana* (Su.Ni.1/17).

Many Ayurvedic researchers proposed theories of single *Avarana* for explaining the concept of hypertension but none has adopted the theory of *Mishra Avarana*, a concept of *Charaka* (Ch.Chi.28/232) which might have been left incomplete for researchers (Ch.Chi.28/217).

In *Raktapradosha Vikaras* most of the symptoms compiled by *Charaka* are an assembled form of essential hypertension symptoms (Ch.Su.24), in the same chapter *Charaka* has described the aetiopathogenesis of *Mada*, *Murchha* and *Sanyasa* which may be the effect of hypertension. Therefore *Raktapradosha* is also the reference which provides the key in the right direction towards the theory of essential hypertension based on Ayurveda.

Ayurveda is the science which depends upon signs and symptoms of the diseases for their diagnosis. As the signs and symptoms of the essential hypertension can be correlated with *Vyadhi Avasthas* e.g. *Raktapradosha Vikaras* and complex *Avarana* then it becomes a light job by taking the etiological factors quoted under the same headings.

#### In *Vidhishonitiya Adhyaya* following are the *Hetus* quoted for *Raktapradosha* manifestation:

- ✓ Rotten & putrefied food possesses contradictory qualities (*Viruddha*).
- ✓ Sleeping during day time after taking liquid, unctuous and heavy food.
- ✓ Excessive anger, excessive exposure to the sun and fire.
- ✓ Unwholesome, hot and sharp wine and excessive food.
- ✓ Consumption of salty, alkaline, acidic and pungent food items.
- ✓ *Kulattha*, *Masha*, *Nishpava* and *Til* oil.
- ✓ *Pindalu*, *Mulaka* and all green eatables.
- ✓ Meat of aquatic, marshy, *Prasaha* and the animals living in holes.
- ✓ Curd, sour whey (*Mastu*), vinegar, *Sura* and *Sauviraka*.
- ✓ Suppression of the urge for vomiting, avoidance of bloodletting (in *Sharada*).
- ✓ Exertion, external injury, heat, taking food before previous food is digested.

#### Other consideration on Essential Hypertension

The diseases like *Pakshaghata*, *Hridroga* and *Mutrarogas* existed at least since the existence of science of ayurvedic medicine. These three diseases are described in Ayurveda in different chapters. These diseases belong to *Trimarmas* and this is a fact from modern science that these three *Marmas* get more afflicted by the high blood pressure. Thus all these can be taken as indirect references concerned to hypertension. As the blood pressure is a disease of circulatory system and Ayurveda doctrine believes in same constituents in morbid as well as physiological conditions by the only difference of normalcy and vitiation, it becomes

necessary to discuss about Ayurvedic circulatory system. *Mula of Rasavaha srotasa* is *Hridaya* and *Dasha Dhamani* (C.Vi.5/8).

*Sushruta* has accepted *Hridaya* and *Dhamani* as *Mula Sthana* for *Pranavaha* and *Rasavaha Srotasa* both. *Sushruta* has also accepted *Raktavahi Dhamani* as a *Mula sthana* for *Raktavaha* and *Mansavaha Srotasa* both (S.Sha.10/12). In the other hand *Sushruta* has described the arterio-venous system in 7<sup>th</sup> chapter of *Sharira* by the name of *Sira*. Therefore it is essential to discuss about the following organs as a part of circulatory system. Thus circulation takes place in three directional ways (S.Su.14/16: Dalhana):

- ❖ **Shabdasantanavata:** *Tiryagagamitvam*
- ❖ **Archisantanavata:** *Urdhvagamitvam*
- ❖ **Jalasantanavata:** *Adhogamitvam*

Here *Dalhana* has commented about direction of *Rasa* and it is seem to be more logical. Many other learned people correlate *Shabdadi Gati* with the actual Kinetics of *Rasa* and *Rakta*. In fact these two opinions are very important in the contribution of the *Avarana* concept related to essential hypertension; direction and intensity of kinetic force. These two factors concerned to *Vata* are having great pathophysiological importance in the *Avarana* process. Blood pressure in different places is different this can be understood by *Rasa-Rakta Samvahana* based on *Shabda*, *Archi* and *Jala Santanavata* and which is mainly related to the intensity of kinetic force (cardiac output). If any how there is any alteration in the direction and kinetic force of *Vata* then it may lead high or low blood pressure. These conditions may be altered by the obstruction of natural direction and kinetics leading hypertension.

## DISCUSSION

According to Ayurveda *Mana* and *Purusha* both generate and nourish from food. If food is un-homologous then it will cause imbalance in both *Manasa* and *Sharira Doshas* to result many diseases. Hypertension is one of disease which is the outcome of such a faulty food regimen and life style. Hypertension is a psychosomatic and hemodynamic disease. It is also known as silent killer or hidden killer because of its associated hazards without expressing any symptomatology. Therefore awareness for hypertension in the society has been increased.

If *Vata* is having *Gati* other than these it is called as *Prakupita Vata*. This *Prakopa* takes place in two ways according to *Charaka*. First two types are much related to *Avarana* and *Vimargagamana* as third type is related to pure *Vata prakopa*. Pure *Vata prakopa* can be categorized in two parts as *Swanidanena prakopa* and *Dhatukshayajanya prakopa* as explained earlier. *Vata-Prakopa* is an important phenomenon in the manifestation of the hypertension along with the involvement of morbid *Kapha*, *Pitta*, *Rakta*, *Mansa* and *Meda*.

### Following Dosh are involved in the pathophysiology of hypertension:

**Vata:** *Vyana*, *Udana*, *Prana*, *Samana* and *Apana*

*Vyana*, *Udana* and *Prana Vayus* have a direct role in the physiology of circulation. any type of derangement of them can cause the derangement of circulatory system; hence these *Vayus* are primarily concerned to hypertension. *Samana* and *Apana* types are secondarily important in the manifestation of the hypertension because hypertension is the disease mainly concerned to *Madhyama Rogamarga* and

*Bahya Rogamarga*, and secondarily to *Koshtha Marga*. But the *Karma* of *Samana* and *Apana* is found to be in the separation and excretion of *Kleda* part from the normal fluid which can be correlated with the 'Na' excretion and 'K' retention and thus these two types can be taken for prime importance in the manifestation of the disease.

**Pitta:** *Sadhaka Pitta*

*Sadhaka Pitta* is responsible for intellectual, grasping and ego (As.H.Su.12/13), if *Sadhaka Pitta* vitiate then it can induce several psychic symptoms like *Bhaya*, *Chinta*, *Krodha*, *Arati*, *Shoka*, *Dukkha*, *Vishada* etc.

**Kapha:** *Avalambaka Kapha*

It nourishes and maintains all *Kapha Sthanas* including *Hridaya*.

In modern science the therapy for hypertension is a palliative in nature. Hence there is no perfect answer for hypertension in allopathic medicine. For Ayurveda the concept of disease is new because it is an instrumental disease invented recently. But it is present at-least since the existence of Ayurvedic *Samhitas* in the form of signs and symptoms because many references present in *Samhitas* like *Pakshaghata*, *Hridroga*, *Mutrarooga* and other symptomatology give the accurate indirect references of hypertension, but lack of proper detail description in Ayurvedic *Samhitas* made Ayurvedists to study upon it, but still no theory is complete.

The *Adhishthanas* of hypertension are whole body and *Mana*, particularly *Hridaya* and *Sira-Dhamani*. All these *Adhishthanas* are capable only for denoting the characteristic of the disease e.g. essential hypertension is a psychosomatic disease. Many Ayurvedic workers named hypertension on the basis of many ways including according to *Adhishthana*; *Sira*, *Dhamani* e.g. *Siragata Vata*, *Dhamani Praticchaya*, according to pathophysiology e.g. *Raktavrita Vata*, *Shleshmavrita Vata* and so on, but as difference of opinions is a well evident part of Ayurveda, hence none of the nomenclature of hypertension is accepted widely.

## CONCLUSION

- ❖ According to Ayurvedic point of view, the increased blood pressure is result of *Murta Avarana*, *Anyonyavarana* and *Raktapradosha*. *Vyana*, *Udana* and *Prana* vitiate after the obstruction of their channels by morbid *Dosha Dushya* along with *Raktapradosha*, leads to rise in the blood pressure. The symptomatology quoted under *Raktapradoshaja Rogas* by *Charaka* almost coincides with essential hypertension symptomatology among those *Shirahashoola*, *Bhrama*, *Klama*, *Anidra*, *Arati*, *Krodhaprachurata*, *Buddhisnana* and *Shariragaurava* are the common symptoms, thus it can be say that *Raktapradosha* is common factor which always associated with essential hypertension.
- ❖ The pathogenesis of essential hypertension may be explained with the concept of *Rakta*, *Pitta*, *Kapha*, *Meda Avarana* and *Anyonyavarana*. In essential hypertension *Avarana* process is derived primarily by *Vyana*, *Udana* and *Prana Vayus* and primarily or secondarily by *Samana* and *Apana*. The *Avaranas* may be simple or *Anyonya*.
- The hypertension is a psychosomatic disease; hence its seat is *Kaya* (somatic) and *Mana* (psychic) both. The first involvement of the entity depends upon the related dominance of etiology in the patient. There is intertwining relation between *Kaya* and *Mana*.

- Physician should try to understand the nature of the disease (*Dosha*), the site of manifestation and etiological factors and should then initiate the treatment. There is no need to give the definite name to each and every disease. Thus in case of hypertension it is essential to understand the nature of the disease rather than to give the name.

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