AN ETIOPATHOLOGICAL STUDY OF HYPERTENSION IN CONTEXT TO AVARANA

Surya Prakash¹, Puneet Kumar Garg*², Laxmi Saini³ and Khushboo Agarwal⁴

¹Assistant Professor, Department of Rog Nidan Evam Vikriti Vigyan, S.S.S.B. Ayurvedic College & Hospital, Kishangarh-Renwal, Jaipur.
²Associate Professor, Department of Rog Nidan Evam Vikriti Vigyan, S.S.S.B. Ayurvedic College & Hospital, Kishangarh-Renwal, Jaipur.
³PG Scholar, Department of Shalaya Tantra, National Institute of Ayurveda, Jaipur, Rajasthan.
⁴Ayurved Chikitsak, RBSK, Medical directorate, Govt. of Rajasthan, Jaipur.

ABSTRACT

High BP or hypertension is reported as the third ranked factor for disability adjusted life years. Hypertension is one of the principal risk factors for heart diseases and stroke, the leading cause of death worldwide. There is no direct reference to Essential Hypertension in Ayurvedic classical texts. Relevant references regarding Essential Hypertension as indicated in those texts hence have been classified by eminent Acharyas. In Ayurveda various luminous have given their opinion to coin a name of disease and to understand it in better way. On objecting the symptomatology and etiopathogenesis of the disease to Ayurvedic fundamentals, it is evident that Avaranajanya Vata Dosha, is responsible for the disease. Present study is a humble attempt to study the disease from Ayurvedic point of view with special reference to Avarana.

KEYWORDS: Avarana; hypertension; rasa; rakta

INTRODUCTION

As Soma (Moon), Surya (Sun) and Anila (Air)- maintain the integrity of the terrestrial world, in the same way the Doshas maintain the integrity of the organism by creating, assimilating and diffusing the strength. All these three functions are regulated by movement (Gati), which
is the main function of Vata. Whenever this function of Vata gets disturbed, it produces different types of diseases in the body, among which Avaranajanya Vyadhis (diseases) are there. Hypertension is one of them in which Avaranajanya pathology takes place. Srotasa (body channels) plays an important role in the Avarana process. Normally, the organization of fluid-balance of the body (water-balance system) is maintained by Kapha. The organization of Thermal balance is maintained by Pitta. The organization of vital balance is maintained by Vata. These three Doshas are considered as the intrinsic cause of the disease, as they get excited and imbalanced, either conferring a predisposition to or actually causing morbidities.

Avarana means to mask, to obstruct, to overlap or to cover. Avarana indicates the obstruction of Vata. It is a distinctive pathological condition where obstruction to the Gati of Vata occurs due to its etiological factors other than its own, leading to its Prakopa, resulting into various types of Vata disorders. The Dosha, Dhatu, Anna, Mala, and Ama can cause the Avarana of Vata. Even any of the subtypes of Vata may cause Avarana of each other which is termed as Anyonya Avarana. The substances which obstructs the pathway of Vata is termed as Avaraka while whose Avarana occurs is termed as Avariya or Avarita. According to Chakrapani, the excessively increased strong Avaraka suppresses the normal action of Avariya i.e Vata. On the other hand, excessively increased Avaraka manifests its action. Avarana of Vata in the form of obstruction to its functional channels leads to its Prakopa. Hence, at that stage, its Prakopa symptoms are also manifested depending upon its site of function involved. Avarana is also explained by the term Vegapratibandha i.e., obstruction to the Vega. It is also defined it as ‘Gatihanana’.

Avarana is the route along which the pathogenesis of many diseases proceeds. Charaka has recommended Avarana as the main process of pathogenesis for many diseases. Commentators especially Chakrapani have made efforts in trying to gain better understanding of different configurations of Dosha and Dushya in Avarana. If these are properly understood and practiced it could lead to a revolution in the treatment of diseases from Ayurveda point of view.

AIM AND OBJECTIVE

To study an etiopathogenesis of hypertension in context to Avarana.
MATERIALS AND METHODS
This article is based on a review of Ayurvedic texts. Materials related to Avarana in the pathogenesis of hypertension concept, and other relevant topics have been collected. The main Ayurvedic texts used in this study are Charaka Samhita, Sushruta Samhita, Astanga Hridaya and available commentaries on these. We have also referred to the modern texts and searched various websites & reports to collect information on the relevant topics.

**Important properties of Vata regarding Avarana**

1. Increased *Laghu Guna* – it leads to increased *Chalatva* which means excessive motion.[1]
2. *Ruksha Guna* – it is responsible for the decrease of unctuousness (*Snehadi Guna Shunyata*) which increases *Riktata*. This results in aggravation of *Vata* which leads to increased *Chalatva of Vata*.
3. *Sukshma Guna* helps the *Dosha* to reach the micro channels of the body.

Vyana produces *Vega* in the heart by Abhighata (impact) and the Sira and Dhamanis Impart the motion by Nodana (pressure). Obstruction to this force leads to different Avaranas and thus the different diseases. Vitiation of the *Vata* naturally leads to the derangements in the functions carried out by him.

Apart from above, hypertension can be found in a number of other conditions i.e., the secondary form of hypertension. Here, hypertension results of the other underlying disease pathology. The role of Avarana needs an additional consideration in understanding and treating the secondary hypertension, as in this type of hypertension the obvious structural organ defect or the obstructive pathology is evident. Mostly KaphaAvruta or PittaAvruta signs are come across. In Vascular involvement – *Kapha Lakshnas* (symptoms), In endocrinal and renal - involvement of *Pitta* or *Kapha Lakshanas* can be come across. Nearly all the secondary forms of hypertension are related to an alteration in hormone secretion and/or renal function. Both in regulation (maintenance) of blood pressure and also in its disturbances, kidneys (renal mechanisms) play a vital role.

*Avarana* is one of the common roots in the pathophysiology of hypertension. Hence one can trace the symptomatology of hypertension from the different Avarana stated below: *Rasa* and *Rakta* are circulating all over body continuously, thus blood pressure is the pressure applied by *Rasa-Rakta Dhatu* on the lateral walls of *Sira* (veins) and *Dhamani* (artery). But when any obstruction comes in the way of *Vayu* which is giving the kinetic energy for circulation of
Rasa and Rakta Dhatu, it will cause Karma Kshaya (decrease in efficiency of functions) of these two Dhatus by impairing the properties (Chala Guna) of Vyana Vayu, Udana Vayu and Prana Vayu. All these processes are chronic in nature therefore simultaneously it also causes Vyana, Udana and Prana Prakopa (vitiation) in the later phase to rise the blood pressure. In most of the patients of essential hypertension, symptoms of Kapha, Pitta and Rakta Prakopa with the symptoms of Vata Prakopa are present.

Kapha Avrita Vata: Generally particular Gunas in Dravya constitution of Kapha, Pitta are responsible for the Avarana process. If the Avarana is happening in Rasavaha Srotasa (Hridaya and Dasha Dhamanis) to manifest hypertension, the vitiation of Kapha and Pitta in Pravahi (effluent in channels) Rasa –Rakta Dhatu is indispensable. Here Avarita may be Vyana, Prana and Udana.

Vyana Vayu performs the functions like Gati (movement), Prasarana (circulation), Akshepa (insinuation), and Nimesha (nictation). Consequently, in both Charaka and Sushruta, the symptoms of Kaphavrita Vyana are very much appertaining to Gati and Cheshta (gestication). In Kapha Avarana mainly Guru (heaviness), Sheeta (coldness), Manda (fluentless/slow) and Sthira (stability) properties are involved which are responsible for obstruction. The symptoms are: Guruta Sarvagat anam (heaviness in whole body), GatiSanga\(^3\) (retention due to obstruction), Cheshtastambha (effortlessness).\(^4\) In Kaphavrita Prana, the symptoms are predominantly related to Pranavaha Srotasa which may be involved in hypertension – Nishvasah, Sangraha.\(^5\) Some of the symptoms of Kaphavrita Udana may be present in hypertension, Vaivarnya (discoloration), Vak-svaragraha (hoarseness of voice), Daurbalya (debility), Gurugatravat and Aruchi (anorexia) etc.\(^6\) When Kapha impinges the force of Vata it manifests the symptoms- Shaitya, Gaurava and Shoola (pain) etc.\(^7\) which coincides with the symptoms of hypertension.

Pitta Avrita Vata: When kinetic force of Vyana Vayu is obstructed by Pitta, certain symptoms come into existence manifesting the disease hypertension. Here Drava and Sara Gunas are important in the obstruction of Chala Guna of Vata, after that Ushna (heat) and Tikshna (pungent) properties sited over Pitta, will manifest Daha, Sarvanga Klama, Gratavikshepa, Sasantapa, Savedana.\(^8,9\) Pitta hinders Prana Vayu to manifest most of the Pratyatma Lakshana Sanchaya (accumulation according to properties) of hypertension here also. Above listed Gunas perform obstruction and manifest Murchha (fainting), Daha (burning sensation), Bhrama (giddiness), Shoola, Vidaha etc.\(^10\) When Pitta obstructs (by
same Gunas listed above) the pathway of Udana Vayu, many symptoms come into existence which are very close to hypertension symptomatology i.e. Murchha, Daha, Klama (mental fatigue), Ojobhransha etc.[11,12] In general Avarana of Pitta, there are certain symptoms which can almost be correlated with hypertension symptomatology i.e. Daha, Trishna (excessive thirst), Shoola, Bhrama, Tama (feeling of entering in darkness) and Vidha.[13, 14]

**Rakta Avrita Vata:** When Rakta obstructs Vata, it causes many symptoms which partially coincide with hypertension symptomatology i.e. Daha, Arti (restlessness), Sarvanaga Swayathu (anasarca) and Mandala[15] (circular patches) Suchibhiriva Nistoda (pricking type of pain), Sparshadvasesha (intolerance to be touch), Prasuptata (numbness), Daha, Santapa, Murchha etc.[16]

**Meda Avarana:** Meda Dhatu is also to be considered here. Main Karma of Meda is to provide Sneha to each and every Dhatu. If one is taking fatty diet, it directly goes to Meda situated all over the body through Rasa-Rakta Dhatu. Therefore it is physiological function of Meda to accumulate Sneha and share it with all Dhatus according to their needs. Mahabhuta constituents of Meda are Prithvi and Jala. For physiological functions in the body these constituents should be in normal quantity. Vitiation of any of them or both will cause the imbalance of physiological functions of the body. By the dominancy of Jala Mahabhuta Mrudu (softness), Snigdha (unctuousness), Hima (coldness) and Pichhila (sticky/slimy) properties of Meda are maintained. By the involvement of Prithvi Mahabhuta Guru, Manda, Sandra, Shira and Sthula (thick) properties of Meda are maintained. This is the physiological balance (Prakrita Sanghata) of the Meda Dhatu.

**Meda: Prithvi + Jala (Excessive)**

When imbalance of these two Mahabhutas takes place, it causes SantarpanajanyaVyadhis (diseases due to excessive nourishment) e.g. Prameha. In Prameha Nidana, Charaka has described Bahu and Abaddha (unbounded) Meda which is abnormal in nature and is caused because of excessive Jala Mahabhuta in the Meda Dhatu all over body.[17] Sthaulya (obesity) and Karshya (emaciation) are Rasanimittaja and excessive ingestion of Madhura Rasa and other Nidanas leads to Ama-Anna Rasa and extra Sneha (oleaginous/glossy) in the body to form extra Meda.[18] Thus if this Meda is increased by Jala Dhatu excessively, it has to take shelter in those Dhatus which are Drava in nature, because flowing is the common and important property of Dravibhuta (liquefaction) Sneha and Rasa – Rakta Dhatu. Dravibhuta Sneha is the part of Meda Dhatu which is having a comparatively thicker consistency than
Rasa and Rakta Dhatu which is in contrast to the Sukshma Srotasanusari (ability to going in microchannels) property of Rasa Dhatu. Thus by increasing the obstruction in Dhamani and Sira and enhancing the activity to lower the kinetic force of Vyana Vayu, Udana Vayu and Prana Vayu. By this response Vyana Vayu Prakopa occurs, thus increasing blood pressure.\textsuperscript{[19]} This pathogenesis may take place without Prameha but Bahu (excessive) and Abaddha (loose) Meda are the essential factors.

**Meda: Prithvi (Dominant) + Jala**

This condition leads to excessive Baddha Meda. Teja Mahabhuta and Vayu Mahabhuta dry the Dravatva and Snehatva and increases Sthira, Sandra and Ruksha Guna in Meda simultaneously increasing Meda Dhatu. Siras originate from Mrudu Paka (mild metabolic digestion) of Meda Dhatu\textsuperscript{[20]} is the main function of Agni (digestive fire). Here the constitution of Meda changes by the Sanskara (refinement) of Agni. By the Ushna Guna of Agni the drying of Sneha in Meda takes place then by Paka Kriya Agni changes its form into particular Sira form. Vayu also acts here to dry the Sneha and to trigger the Agni to perform its work.\textsuperscript{[21]} Akasha and Vayu function in the formation of the lumen part.\textsuperscript{[22]} The Mahabhuta configuration of Meda should be normal for proper function of Sira. In abnormal condition of Meda, Siras also change from normal to abnormal and in later phase this abnormal Meda can obstruct micro to gross channels and manifest many diseases like hypertension and coronary artery disease.

**Anyonya Avarana**

**Symptoms of hypertension found in following types of Anyonyavarana**

- Vyanavrita-Prana\textsuperscript{[23]}
- Samanavrita Vyana\textsuperscript{[25]}
- Pranavrita Vyana\textsuperscript{[27]}

- Pranavrita Udanda\textsuperscript{[24]}
- Samanavrita Apana\textsuperscript{[26]}

Thus, majority of symptoms mentioned in different Avaranas are similar to that of hypertension. But not a single symptomatology of Avarana is complete in itself to cover all the symptoms. Thus the complete symptomatology can be found in different locations of Avarana. Symptoms of essential hypertension are much close to Kapha, Pitta, Rakta and Meda Avarana and Rakta Pradosha in unison. Whenever there is a complex of symptoms of different Doshas it should be called as Mishra Avarana.\textsuperscript{[28]} Vagbhata has elucidated the theory of Mishra Avarana somewhat in detail. He says that there are innumerable types of Mishra-Avarana in which Pranadi five types of Vayus and Kapha, Pitta, Sapta Dhatu,
Trimalas these twelve entities take part. Taratamya (compatibility/consequences) and Vikalpa (alternative) in their complex again give the infinite types of complex Avaranas. But these Mishra Avaranas can be diagnosed on the basis of symptomatology and aggravated or decreased functions of involved types of Vata as well as their Sthanas (states).

By taking all contexts of Avaranas and hypertension symptomatology into consideration, conclusion can be drawn that “Rakta, Meda, Pitta, Kapha’ and ‘Vyana, Udana, Prana’ are the most probable participating entities found in the complex Avarana of hypertension.

DISCUSSION

Acharya Sushruta has described the circulatory system in most flourish form. Mainly all the Acharyas have described the circulation of Rasa Dhatu only but we should consider Rakta Dhatu along with Rasa Dhatu. Rasa-Rakta Samvahana is multidirectional and its kinetics varies by the area of the body and according to the need of Sapta –Dhatu. Acharya Sushruta has tried to elaborate the theory of circulation on the basis of direction, thus Rasa Dhatu, the resultant of digestion and very micro in nature circulates all over the body in three directions.[29] i.e. Upward (Urdhvaga), downward (Adhoga) and transverse (Tiryaga).To describe the direction of Rasa Dhatu, Sushruta has given examples of Shabda, Archi and Jala. Thus, circulation occurs in three directional ways as Shabdasantana Vata - Tiryagagramitva, Archisantana Vata - Urdhvgamitvam, Jalasantana Vata - Adhogamitvam. This three directional circulation of Rasa given by Dalhana, seems to be very logical. Here, Acharya Dalhana has commented about direction of Rasa Dhatu and it seems to be more logical. Many other learned people correlate Shabdadi Gati with the actual Kinetics of Rasa Dhatu and Rakta Dhatu. In fact these two opinions are very important in the contribution of the Avarana concept related to Essential hypertension.[30]

• The direction
• The intensity of kinetic force

These two factors concerned to Vata Dosha are having great pathophysiological importance in the Avarana process. Blood pressure in different places is different this can be understood by Rasa-Rakta Samvahana (circulation) 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 Dosha then it may lead to high or low blood pressure. These conditions may be altered by the obstruction of their natural directions and kinetics leading to hypertension.
CONCLUSION
From the above discussion, it is concluded that, Avarana is one of the common roots in the pathophysiology of hypertension. In this way, Avarana can be used as the backbone to explain the Samprapti of a number of newer diseases, which have evolved, with the passage of time since the last Ayurvedic treatise was written. After understanding the pathogenesis of Avaranajanya disease the selection of appropriate drug should become easy.

REFERENCES


