

Ayurvedic Review and Metanalysis on Hypertension (Essential Hypertension)

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Cite this paper as: Dr. Sanjay A. Dhurve, Dr. Amol M. Patil, Dr. Prasad D. Namewar, Dr Sachin R. Patil, Dr. Kirti Bhati, (2025) Ayurvedic Review and Metanalysis on Hypertension (Essential Hypertension). *Journal of Neonatal Surgery*, 14 (9s), 947-957

ABSTRACT

Ayurvedic texts provide no straight references to EHT. But from compilation of scattered references, it is concluded that, EHT is a Vata-Pitta Pradhan Tridoshaj Vyadhi, and Rasa Rakta are the chief culprits, and add the progression of vitiation of psychological factor i.e. Raja and Tama The main pathology occurs in Rasa-Rakta Dhatu. These vitiated Doshas leads to vitiation of Rasavaha, Raktavaha and Manovaha Srotas. As the Adhishthan of the diseases heart, distortion and structural changes take place in heart to increased mortality. Further, after understand EHT on the basis of Ayurvedic fundamentals, the treatment has been selected in compliance with the principles propounded...

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

1. INTRODUCTION

Hypertension is the 'Silent Killer' of mankind. An elevated Arterial Pressure is Probably the most important 'Public Health Problem' in developed countries. It is common Asymptomatic, Readily, Detectable, usually easily treatable and of uncured them often leads to Lethal Complication. If it is untreated in the long run, it chiefly affects Heart, Kidney, Brain & Retina. Thus, now a day it has become a life-threatening disease.

Though, Ayurvedic texts provides no straight reference to Essential Hypertension, here is an effort to understand the possible pathogenesis in terms of involved factors like Dosha, Dushya etc. According to Acharya Agnivesh naming of a disease is not essential. Importance lines in the removal of the disease, thus the physician not ashamed of fact & try to comprehend responsible Doshas & treat them according to it.

Acharya Charaka recommends that, if a Physician is unable to diagnose the diseases, he should treat the diseases by ruling out Vitiated Tridosha & Nidan Factors. (Ch. Su. 18/44). Here we made an attempt to treat EHT by Ayurveda, which aims at the radical removal of the diseases.

AIMS & OBJECTS: To make conceptual studies regarding Essential Hypertension according to "Tridoshaj principle" of Ayurveda in the light of Modern Science,

NEED FOR STUDY

EHT is common, asymptomatic, readily detectable, usually easily treatable disease and often leads to lethal complication if left untreated. It increases the risk at least two-fold for cardiovascular diseases including coronary artery disease (CAD), congestive heart failure (CHF)/stroke (ischemic and hemorrhagic), renal failure, peripheral arterial disease and diabetes.

A number of conceptual studies have been conducted to develop the correlates of HTN in Ayurveda. Certain scholars have attempted to correlate HTN with “Raktagata Vata” disease as described in ayurvedic classics while others compare it with “Vyana Bala Vikruti”. Attempt has also been made to compare the ayurvedic patho terms - Dhamani Praticaya and Dhamani Kathinya with atherosclerosis and arteriosclerosis which are the known pathological associates of HTN.

Thus, the Samprapti of this disease encompasses, on one hand, the dominant role of Vata while on the other, the pathological contributions of Kapha, Ama and Meda in causing Dhamani Praticaya and Dhamani Kathinya.

NIDANA (PROBABLE ETIOLOGY)

The disease EHT has not been described individually in the Ayurvedic texts so its Nidanas have also not been enlisted separately. Hence Nidanas are classified as below:

Aharaja Nidanas:- Guru & Snigdha Bhojana, Abhishyandi Bhojana, Sheeta & Ushna Bhojana, Virruddhasana, - Adhyasana

Viharaja Nidanas:- Divaswapa, Ativyayam, Avyayam, Ratrijagarana, Vegadharana

Manas Bhav Nidanas:- Chinta, Krodha, Shoka, Irshya, Bhaya, etc.

According to the Ayurvedic Point of View Etiological Factors Leads to Dosha Prakopa in Following Ways:

Excessive Intake of Salt:

- 1) Ati-lavana intake leads to increase of Abhishandi, Sukshma, Ushna and Vyavayi Gunas in the body. (Ch.Ch.Su.13/98)
- 2) Abhishanda leads to increase of Kapha by its Guru and Pichhila Guna to obstruct Rasavahi Siras. (Sha.Pu.4/24)
- 3) Sukshma Guna leads to Asrika Prakopa because of high penetrating power in micro channels and Vyavayi Guna leads to spreading of the Dravya all over the body (Chakrapani Com.).
- 4) Ushna Guna leads to Pitta Prakopa.
- 5) All Lavanans are Vishyandi, Sukshma, laxative, Mrudu in nature, alleviate Vata, vitiate Kapha and Pitta, Tikshna and Ushna in nature (A.H.6/143).

Other Nidanas Concerned to Hypertension:

- 1) All Ksharas are very Tikshna, Ushna in nature and vitiates Pitta and Asrika. (A.H.6/151)
- 2) Viruddha Ahara is like Garavisha. (A.H.7/29)
- 3) Nishpava vitiates Vata, Pitta and Rakta. (A.H.6/20)
- 4) Masha vitiates Kapha and Pitta. (A.H.6/21)
- 5) Curd increases Medasa, Shukra, Bala, Shleshma, Pitta, Rakta, Agni along with Shopha. (A.H.5/29)
- 6) Ati-Ahara Sevana leads to Yugapata Tridosha Prakopa. (Ch.Ch.3/7)
- 7) Madya pana leads to Pitta Prakopa.
- 8) Excessive Madhura (sweet) Rasa intake leads to diseases related to Medasa, Shleshma, obesity, loss of appetite, coma and diabetes etc. (A.H. 10/9) heaviness and weakness (Ch.Su.26/1)
- 9) Excessive Amla (sour) Rasa intake leads to Kapha, Pitta and Asra Prakopa, Shaithilya (loss of function), Vertigo. (A.H.10/11), Raktadushti (Ch.Su.26/2)
- 10) Excessive Lavana (saline) Rasa intake leads to Pitta Prakopa, aggravation of Rakta and Vata-Rakta (Ch.Su.26/3, A.H.10/13).
- 11) Excessive Katu (pungent) Rasa intake leads to fainting (Murchha), vertigo (Bhrama), thirst, tremor (Ch.Su.26/4, A.H.10/19) contraction of blood vessels (Ayurveda Rasayana Com. A. H. 10/ 19)
- 12) Excessive Kashaya (astringent) Rasa intake leads to obstruction of channels and Pakshavadha (by its Khara, Ruksha and Vishada properties). These Rasas on excessive ingestion can manifest the disease EHT.

Vega-Vidharana: In Ayurveda, suppression of natural urges has unique importance in the manifestation of mainly Vata Vyadhis. As hypertension is the outcome of Vata Dosha involvement, suppression of natural urges which aggravates Vata Dosha is also an etiological factor for hypertension. Vagbhata has also implied that all the diseases may manifest by the suppression of natural urges (A.H.4/23). Hridroga is inferred to be a complication of hypertension by modern sciences simultaneously Ashtanga Hridaya has implicated Hridroga as the outcome of many Vegavidharanajanya Vikaras. (e.g. flatus, thirst, cough, exertion induced hyperventilation, Tears -A.H.4) Thus here substantial theory of Udavarta can be taken as an aetiological factor of hypertension by taking direct and indirect implications from different places.

Etiological factors of HTN

1. Vaya (Age): The age at which EHT usually occurs is between 35 and 50. The age-related rate of rise in blood pressure is consistently greater for systolic than diastolic BP. SBP tends to rise until 70s and 80s, whereas DBP tends to remain constant or decline after the 40s. As a consequence, the risk of isolated systolic hypertension increases progressively with advancing age and is common type of hypertension in elderly.

2. Linga (Sex): Studies of women have shown that they tolerate hypertension better than men do and lower coronary mortality rates with any level of HTN. The Framingham study shows that it takes higher blood-pressure to hurt women but when their pressures are high, they do suffer the consequences. The sex incidence is slightly lower in females below the age of 50. Overall, the prevalence and incidence of HTN are slightly higher in males compared to females.

3. Genes: Mutations in at least 10 genes have been shown to raise or lower BP through a common pathway by increasing or decreasing salt and water reabsorption by the nephron. The genetic mutations are responsible for 3 rare forms of mendelian (monogenic) hypertensive syndromes –Glucocorticoids - Remediable Aldosteronism (GRA), Liddle's syndrome and apparent mineralocorticoid excess; have been identified, whereas in a fourth, autosomal dominant HTN with brachydactyly, the gene is not yet identified but has been mapped to chromosome 12(12p). Subtle variations in one of these genes may also cause some forms of EHT.

4. Family history: Some families have a higher incidence of HTN than others. Studies of the family history of hypertensive patients have shown that it occurs three to eight time more frequently in their relations than in the general population. Family history of HTN is a primary predictor of HBP.

5. Jatiprasakta (Race): Blacks develop HBP more often than whites, Hispanics, Asians, Pacific Islanders, American Indians or Alaska Natives. Compared to whites, blacks also develop HBP earlier in life. The relation between insulinemia, insulin resistance and BP differ among racial groups and may be mediated by mechanisms active in whites, but not in Pima Indians or blacks.

6. Lavana sevana (Salt intake): The salt (sodium) content of the diet plays a role in HTN. The people who salt their food heavily are also the people with the highest incidence of HTN. The Japanese who consume a vast amount of salt (Sodium glutamate in Soya Sauce) have a very high incidence of HTN. Moreover, when salt is cut out the diet, the pressure of a hypertensive often falls. Recent Studies have shown that a moderate reduction in salt intake causes a reduction in the stiffness and thickness of the arterial wall, independent of the blood pressure. The structural changes in intramyocardial coronary arteries induced by a high salt diet are accompanied by a number of reactive oxygen species which, among other effects, oxidize nitric oxide thus reducing its dilator effect and the arteriolar response to acetylcholine. As a rise in salt intake is usually accompanied by a small rise in plasma sodium and plasma sodium tends to be raised in EHT.

7. Obesity and insulin resistance: Obesity, and especially abdominal obesity, is the main hypertensinogenic factor. It was estimated in the Framingham study that each 10% weight gain is associated with a 6.5 mm Hg increase in SBP⁸⁷. Obesity is also the cause of insulin resistance, adult-onset DM, LVH, Hyperlipidemia, and atherosclerotic disease. A direct association between HTN and BMI (weight in kilograms divided by the height in meters) has been observed in cross-sectional and longitudinal population studies from early childhood to old age 88. A BMI of < 25 is considered normal or healthy, whereas a BMI of 26 to 28 increases the risk of HBP by 180% and the risk of insulin resistance by >1000%.

8. Neurogenic factors: Neurogenic factors may also be responsible for the vasoconstriction which is thought to lead to HTN but sympathectomy does not produce a permanent drop in HTN in most cases. This factor has not therefore been considered important in EHT. Generalized vasoconstriction is certainly seen in the kidneys and elsewhere in EHT. Probably this leads to HTN, but the cause of this arteriolar constriction is not known.

9. Mano dosha (Occupational stress): Most adults spend a substantial portion of their lives at work, so it should not be surprising that chronic job stress can have a powerful impact on health. High job strain has been associated with increased ambulatory BP at work, at home, and during sleep, as well as increased left ventricular mass, consistent with the anticipated effects of sustained BP elevation⁹⁰. The impact of stress on the development of HTN is believed to involve a sympathetic nervous system response, in which release of catecholamines leads to increased heart rate, cardiac output, and BP. Sympathetic responses to acute stress are well documented, but the process by which stress contributes to sustained BP

elevation over time is not well understood. It may be repeated activation of this system, failure to return to resting levels following stressful events, failure to habituate to repeated stressors of the same type, or some combination that is responsible for the development of hypertension.

10. Physical Inactivity: Dynamic exercise raises BP and isometric raises it a lot despite this, there is good evidence, that people who take regular exercise are healthier and have low BP than those who do none. More recently, a study of the effects of different level of exercise in a randomized controlled trial have demonstrated that increasing exercise lowers BP independently from any other dietary manoeuvres. This effect could largely result from diminished sympathetic activity. While moderate normal exercise brings about the healthy state of the body and mind. It also adds to Ayu, Bala, and amplification of Agni, stability and normalizes the elevated dosas.

11.Habit: Habit of smoking and alcohol intake also causes HTN. High alcohol intake (more than 6 units a day) has been shown to be associated with elevated BP in large number of studies. Overwhelming evidence supports the conclusion that cigarette smoking causes various adverse cardiovascular events⁹³ and acts synergistically with HTN and dyslipidemia to increase the risk of coronary heart disease⁹⁴. Smoking causes an acute increase in BP and heart rate and has been found to be associated with malignant HTN⁹⁵. Nicotine acts as an adrenergic agonist, mediating local and systemic catecholamine release and possibly the release of vasopressin.

Some of the etiological factors of Shonita Dushti segregated here which are similar to that of HTN

SR. NO.	SHONITA DUSHTI	HYPERTENSION
1	Pradushta Bahu Teekshoshna Madya, Sura, Souveeraka	Excessive alcohol intake
2	Ati Lavana Sevana	Excessive salt intake
3	Bhukhta Diva Praswapatam Drava Snigdha Gurunicha	Sedentary habits, more of consumption and less utilization
4	Krodham Bhajatam	Mental stress
5	Shrama	Strain (isometric exercises)
6	Sharatkala Swabhava	Most of the complications of HTN like MI, Stroke happens in winter

SAMPRAPTI

Overuse of salt and alcohol vitiate Sadhak Pitta and Shonita. Sedentary life style vitiates Avalambak kapha and psychological stress vitiate Prana Vayu, Raja Tama Bhava. Prana Vayu has influenced on Hridaya vitiates Hridaya and its components like Sadhak Pitta, Avalambaka Kapha, Oja. Shonita is also involved as it is located in Hridaya. Prakupita Avalambakakapha induces exaggerated contractility of the heart while aggravated Vyana Vayu leads increased Gati, the force of ejection of blood from Hridaya. These events result into forceful expulsion of blood through Dhamanis, ultimately leading into increased resistance in vessels ensuing High blood pressure. At same time because of Aharaja, Viharaja and Manasa Hetu there is Jathargnimandhya which produce Ama (Apkvaannarasa), as consequence of Rasa Raktadi Dushti with Apkava Rasa Raktadivruddhi can takes place leading to increase viscosity and fluidity of blood. This gives rise to hemodynamic changes where heart has to pump with more pressure. Obesity has been claimed for its role in manifestation of hypertension. Siras (which are adhithana of hypertension) are originated from medodhatu. Vitiated medo dhatu causes strotasavarodha. Ruksha guna vriddhi causes hardening of blood vessels and reduction in elasticity of vessels results in reduced lumen of blood vessels (sira & dhamani).

SAMPRAPTI – GHATAKA: -

Doshas-Vata(All five types; mainly Vyana Vayu),Pitta (Sadhaka & Pachaka), Kapha (Avalambaka)

Dushya - Rasa, Rakta, Meda

Agni - Jatharagni, Dhatvagni

Ama - Jatharagni, Dhatwagni-Mandya-Janya

Srotasa - Rasavaha, Raktavaha, Manovaha, Medovaha

Srotodushti - Ati-pravritti, Sanga Type, Siragranthi

Udbhava Sthana - Ama-pakwashaya

Sanchara Sthana - Rasayani (dhamanis)

Vyaktasthana - Sarwang Sharira

Adhisthana - Manodaihika (Psychosomatic) Hridaya, Sira, Dhamani, Srotas.

Rogamarga - Bahya, Madhyama (Including Tri-Maha-Marma-Hridaya, Shira, Basti)

Vyadhi Swabhava -Aashukari/Chirakari

SAMPRAPTI

SCHEMATIC PRESENTION OF PROBABLE SAMPRAPATI OF HYPERTENSION
(HYPERTENSION)

(ESSENTIAL

Nidana sevana



Accumulation (Sanchaya) and Provocation (Prakopa) of vata dosha



(By its Ruksha, Sheeta, Khara Guna – Arteriosclerosis)

Prasara and Sthanasamshrya of provoked Vata dosha at Rasavaha, Raktavaha and Manovaha Srotas



Vitiation of above Srotas and Heart content



Vyana Vayu



Sadhaka Pitta



Avalambaka Kapha



By Chala, Sheeta Guna



By Pichhil, Sthir, Guru Guna



Vyanavayu Vega Vriddhi
(Sroto-Sanga)



Dhamini-Kathinaya



Increased cardiac output (Increased peripheral resistance)



Persistent elevated blood pressure (Essential Hypertension)

The pathogenesis of hypertension takes place at both physical and psychic level simultaneously depending upon the Dosha-Dushya Sammurchhana. Agnidushti results in Ama formation and subsequent Dhatudushti (Rasa and Rakta). This leads to Khavaigunya (obstructive pathology in channels). The Ama

production results into 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 BP.

PURVARUPA: Most of the hypertensive patients are asymptomatic or present with subjective symptoms like headache, vertigo etc. Many patients are diagnosed at routine check-up or other health problem. So, the premonitory symptoms of EHT are indistinct. the patients of Essential Hypertension, it is said to be Vata Pitta Pradhana Tridoshaja Vyadhi and Purvarupa of the Vata Vyadhi is said to be Avyakta.

RUPA:

Shirahshoola (Headache): Acharya Sushruta has stated Shoola cannot occur without the vitiation of Vata (Su.Su.17/7). Charaka has included Shirahshoola in 80 types of Nanatmaja Vata vyadhi. Further, Charaka while explaining Samanya Samprapti of Shiroroga mentions that Prakupita Vata dosha causes Dusti of Rakta, localizing in Shira, produce Shiroroga, which includes Shirahshoola also. This way due to Vata Dusti, Shirahshoola may occur.

Nidranasha (Insomnia): Vitiating Vata and Pitta and Manasa Santapa are responsible for Nidranasha (Su. Sa. 4/42). Charaka has mentioned it under Nanatmaja Vikara of Vata. Laghu Guna of Vayu generally causes Nidranasha. Under the symptoms of Vata-Pitta Vriddhi, Acharya Sushruta has mentioned both Nidra-Alpata and Nidranasha (Su.Su.15/14).

Bhrama (Giddiness): Acharya Sushruta has mentioned Bhrama as a result of vitiated Raja, Pitta and Vata. (Su. Sa. 4/56). The Chala Guna of Vayu becomes dominant due to inflated Raja Dosha, makes patient to feel him like revolving (Dalhana on Su. Sa. 1/20).

Tamodarshana (Flashes before eyes): Acharya Charaka has described Tamodarshana in Rakta Pradoshaja Vyadhi; hence Tamodarshan occurs due to Srotorodha in Rakta Vahinis of Shira (Ch. Su.24/13).

Daurbalya (Weakness): Daurbalya has also been described in Shonitaja Vyadhi. (Ch. Su. 24/13). Impairment of Dhatu formation due to Rasa-Rakta Dusti by vitiated Vata Dosha also affects the formation of Oja (Prakrita Bala), which produces Ati Daurbalya.

Hridadravata (Palpitation): Acharya Gangadhara (Ch. Su. 20/14), has clearly mentioned that Hridadravata means increased Gati of Hridaya. Moreover, while describing the symptoms of Rasakshaya, Acharya Charaka has mentioned “Hridayam Tamyati” (Ch. Su.17/64).

Gangadhara has commented on “Tamyati”. Here, Vyana vayu is aggravated with its Chala Guna resulting in Hridadravata.

Swasakashtata (Breathlessness): Swasakashtata is pathological state of Pranavaha Srotasa. Kapha when obstructs the Srotasa, Prana vayu gets vitiated, resulting in Swaskrichhata. Here in this context, Sama Rasa produced by Agnivaishamya, which gives rise to Malarupakapha and its Sanga in Pranavaha Srotasa may be the reason of Swasakashtata.

Akshiraga (Redness of Eyes): Akshiraga is described among Shonitaja roga in Vidhishoniteeya Adhyaya. Sushruta has also mentioned that redness of eyes is due to Raktavridhi. (Su. Su. 15/19). EHT is co-relating with many diseases like Raktagata vata, Rakta avrta Vata, etc. So, comparison of these diseases on the basis of symptomatology is given as below:

NOMENCLATURES OF HYPERTENSION IN AYURVEDA

Terms which have correlation of “Hypertension”	Terms which indicate towards Vata Avarana	Diseases of Dhamani	Particular conditions related to Rakta
Abhivridha Raktachapa	Avrita-vata	Dhamani Kathinya	Raktagata Vata
Deha Dhruk	Raktavrita Vyana	Dhamani Poornata	Raktashrita Vyadhi
Raktachapa	Vyana Prakopa	Dhamani Prapurnata	Rakta-vata
Rakta Vikshepa	Shleshmavrita-Vyana	Dhamani Praticaya	Raktavridhi
Raktavega Vriddhi	Avrita-Vyanodana Vayu	Dhamanigata Vata	Rudhira Mada
Rasa Bhara	-	Siragata Vata	-
Rasoudvega	-	-	-
Uccharakta Bhara /Chapa/Daba	-	-	-
Vyana Bala	-	-	-
Vyanabala Vridhi	-	-	-

Rakta Sampeeda	-	-	-
Rakta Sammarda	-	-	-
RaktaChhapaAbhivridhhi	-	-	-

Raktagata Vata: Raktagata Vata means involvement of Rakta by vitiated Vayu. Out of the various symptoms of it Snatapa, Vaivarnaya, Aruchi and Bhrama may be present in the patients of Essential Hypertension.

Siragata Vata: Out of the symptoms of Siragata Vata Manda Shotha, Sirapurnata, Sira Svadhanmans seem to the symptoms of complication in patients of Essential Hypertension.

Raktavrudhi: The symptoms of Raktavrudhi like Raktapitta, Sammoha, Sira Puranata, Rakta Mutrata may be present as a complication of EHT. Only Rakta Netrata considered as the symptom of Hypertension. Athavale (1979) suggested Rakta Vegavrudhi as Hypertension.

Avruta Vata: The symptoms of Pittavritta Vata, Pittavritta Udana, Pranavritta Udana and Raktavritta Vata like Daha, Bhrama, Tama, Avasada, Bala Nasha, Swasa, Hridroga, etc. may be present in patient of EHT.

Symptoms of Pittavritta Vata in Brihatrayi:-

- 1) Daha
- 2) Trishna
- 3) Shoola
- 4) Bhrama
- 5) Tama
- 6) Vidaha
- 7) Sheet Kamita

Symptoms of Pittavritta Udana in Brihatrayi:

- 1) Murchha
- 2) Bhrama
- 3) Klama
- 4) Avasada
- 5) Bala nasha

Symptoms of Pranavritta Udana in Brihatrayi:

- 1) Siragraha
- 2) Pratishyay
- 3) Swasa
- 4) Hridroga
- 5) Mukha Shosha

Clinical Features of Hypertension according to Modern and Predominant Dosha according to Ayurveda :

Sr. No.	Clinical Features of Hypertension	Predominant Dosha
1	Headache	Vata, Pitta
2	Dizziness	Vata

3	Palpitation	Vata
4	Easy fatiguability	Vata, Pitta
5	Tinnitus	Vata
6	Epistaxis	Pitta
7	Blurring of vision	Vata, Pitta
8	Angina	Vata
9	Fainting	Pitta and Vata
10	Nausea	Pitta and Kapha
11	Odema	Kapha
12	Anger	Pitta
13	Flushing	Pitta
14	Burning sensation	Pitta, Vata
15	Tingling numbness	Vata
16	Insomnia	Pitta, Vata
17	Decrease memory power	Vata
18	Hardening of vessels	Vata and Kapha
19	Narrowing of vessels	Vata and Kapha

Clinical Features of Rakta-Pradosha Coinciding with the Clinical Features of EHT and their Dosha Predominance: (Ch.Su.24)

Sr. No.	Clinical Features of Rakta-Pradosha	Dosha Predominance
1	Akshiraga	Pitta
2	Raktapitta	Pitta
3	Raktameha	Pitta
4	Vatashonita	Vata
5	Pipasa	Vata, Pitta
6	Gurugatrata	Kapha
7	Santapa	Pitta
8	Daurbalya	Vata
9	Shirhashoola	Vata, Pitta
10	Klama	Pitta, Vata
11	Arati	Pitta
12	Krodhaprachurata	Pitta
13	Buddhisanmoha	Vata, Kapha
14	Sweda	Pitta

15	Mada	Pitta
16	Kampa	Vata
17	Tandra	Kapha
18	Tamahadarshana	Vata, Pitta
19	Bhrama	Vata, Pittra

Some of the Clinical Features of Rakta prakopa described By Vagbhata which correlate with EHT Symptomatology: (As. Su.H.27/3-4)

Sr. No.	Clinical Features of Rakta prakopa	Dosha Predominance
1	Netraroga	Pitta, Vata
2	Shiroroga	Pitta
3	Mada	Pitta
4	Trishna	Pitta
5	Pittasra	Pitta
6	Bhrama	Pitta, Vata

Avarana and Clinical Features found in EHT:

Sr. No.	Avaraka Avrita Clinical Features	Reference
1	Kapha Vata Gaurava	C.Ch.28/62
2	Shopha, Gurutva	S.Ni.1/33
3	Pitta Vata Daha, Trishna, Bhrama, Tama.	C.Ch.28/61
4	Daha, Santapa, Murchha	S.Ni.1/32
5	Rakta Vata Daha, Swayathu	C.Ch.28/64
6	Prasuptata	S.Ni.1/33
7	Meda Vata Adhyavata (prone to EHT)	C.Ch.28/66
8	Pitta Prana Murchha, Daha, Bhrama.	C.Ch.28/221
9	Kapha Prana Nihishwasa-Uchhavasa Sangraha	C.Ch.28/223
10	Pitta Udana Murchha, Klama	C.Ch.28/222
11	Murchha, Daha, Bhrama, Klama	S. Ni. 1/35
12	Shleshma Udana Daurbalya, Gurugatrata	C.Ch.28/224-225
13	Pitta Samana Atisweda, Trishna, Daha, Murchha	C.Ch.28/225-226
14	Sweda, Ushnata, Murchha	S.Ni.1/36
15	Pitta Vyana Daha, Klama, Santapa	C.Ch.28/227-228
16	Daha, Klama	S.Ni.1/38
17	Kapha Vyana	C.Ch.28/229 --- Su. Ni. 1/39

SADHYA ASADHYATA OF EHT:

Essential hypertension is Yasya in Nature, Because of 1) It is the disease which involves two Rogamarga i.e. Hridaya, Murdha. 2) (Madhyama Rogamarga) Shira, Dhamani and Rakta (Bahya Rogamarga) hence it is Yasya in nature. 3) Multi Dhatu involvement – Rasa, Rakta, Meda etc. 4) Affects or related to Marmas like Hridaya and Shira. 5) It is genetic and hereditary (Sahaja) also. 6) Multiple etiological factors are responsible. 7) In advanced condition of the diseases related to Trimarmas give very bad prognosis hence in this stage it becomes Asadhyata. 8) If Avarana induced disease left untreated, after one year it becomes incurable (Ch. Chi. 28/235), hence in early stage it can be curable by doing the proper treatment in time.

2. CONCLUSION

Hypertension is currently the most common illness, affecting one in every five individuals. According to the World Health Organization, in India, hypertension affects 23.10 percent of men and 22.6 percent of women over the age of 25. Sedentary lifestyles and unhealthy eating habits are the primary causes of hypertension in our society. Factors such as excessive salt consumption, alcohol use, and smoking contribute to its development.

Ayurveda recognizes three components responsible for hypertension: Aharaja Nidan, Viharaja Nidan, and Manasik Nidan, which disturb Vata, Pitta, and Kapha. Ayurvedic treatment approaches based on Samprapti (pathogenesis) effectively address all three components simultaneously, including Ahara (diet), Vihara (lifestyle), and Ausadha (medications). Pathya-Apathya (healthy-unhealthy food and lifestyle patterns), Ahara and Vihara modifications.

Vata acts as the major dosha in Hypertension. Pitta also plays secondary role in producing the symptoms in Hypertension i.e. dizziness and headache.

In Ayurveda equilibrium of Doshas, Dhatus, Malas and Agni are considered as 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

REFERENCES

- [1] Tripathy Brahmananda, editor. Charaka Samhita of Agnivesha, Charaka Chandrika Hindi commentary. 1st ed. Varanasi: Chaukhamba Orientalia; 1999. Chikitsa Sthana; Grahavidosha chikitsa, Chapter-15, Verse 36.
- [2] Sushruta Samhita of Maharshi Sushruta (Vol II) Dalhana Edited by Dr. Anant Ram Sharma, Chaukhamba Surbharati Prakashan Varanasi Reprint 2008 Sha 4/30
- [3] Himani, Alok Kumar Srivastava, Parul Sharma and Krishna Kumar Sharma - Essential Hypertension: What Ayurveda Can Offer. Int. J. Adv. Res. 7(7)
- [4] Harrison, Principles of Internal medicine, Naomi DL Fisher, Gordon H. Williams, 16th edition,
- [5] K. Chaudhary, Parul Sharma, Ved Bhushan Sharma. Hypertension and its management through ayurveda. Journal of ayurvedic and holistic medicine 2015
- [6] WHO report of Prevention and control for Cardio vascular diseases, 2001-2002.
- [7] Das Sk, Sanyal K, Basu A. Study of urban community survey in India: growing trend of high prevalence of hypertension in a developing country. Int J Med Sci 2005
- [8] Pt. Kashinath Sastri and dr. Gorakhnath Chaturvedi. Vidyotani on Charak Samhita of Charak, Sutrasthana, chapter 18, verse no. 44. Varanasi; Chaukhambha Bharati Academy; 2013
- [9] Dhamle Madhumati. Post Graduate Thesis on the study of Yojana Chatushka of Charaka and Yojana for the management of Raktashrita Vyadhi (hypertension). Department of Basic Principles, Institute of Post Graduate Teaching and Research in Ayurveda; 2001.
- [10] Kearney PM, Whelton M, Reynolds K, Muntner P, Whelton PK, He J. Global burden of hypertension: Analysis of worldwide data. Lancet 2005
- [11] Thankappan Kr, Sivasankaran S, Sarma Ps, Mini G, Khader Sa, Padmanabhan P, et al. Prevalence-correlates awareness-treatment and control of hypertension in Kumarakom, Kerala: baseline results of a community-based intervention program. Indian heart j 2006;
- [12] Patwardhan K. The history of the discovery of blood circulation: unrecognized contributions of Ayurveda masters. Adv Physiol Educ 2012

- [13] Agrawal, M.D., Nandini, Sharma, V. and Chauhan N.S. 2010. Herbal Remedies for Treatment of Hypertension, International Journal of Pharmaceutical Science and Research, 1(5)
- [14] Atul Kale. A clinical study on the Ayurvedic Samprapti of essential hypertension and its management with Sarpagandhadi Vati. Thesis-Kayachikitsa ; Jamnagar; IPGT&R; 2005
- [15] Tripathi B, Samhita C, Adhyaya S (2012) 24 (5 - 10) P - 430. In: Chakarpani & Charak Chandrika (Eds.), Chaukhamba Surbharati Prakashan, Varanasi, India.
- [16] Kalangutkar D, Sahu AK, Patekar R. Essential hypertension - an ayurvedic view. International Journal of Science & Healthcare Research. 2019; 4(2): 168-175.
- [17] Agrawal S, Pol H, From 5th World Ayurveda Congress 2012 Bhopal, Madhya Pradesh, India. 7e10 Dec 2012. PA01.17. A clinical study to evaluate the effect of extract based herbal formulation on hypertension e a single blinded standard controlled randomized study. Anc Sci Life 2012;32(Suppl. 1)
- [18] Manish Agrawal, D. Nandini, Vikas Sharma and n. S. Chauhan; -herbal remedies for treatment of hypertension; international journal of pharmaceutical sciences and research (2010), vol. 1, issue 5:1-21
- [19] Madhava Nidanam Madhukasha Vyakhya Ayurvedacharya Shri Yadunandan Upadhyay, 1st part, Chapter 22 Publication New Delhi
- [20] Kayachikitsa, Professor Ajay Kumar Sharma, 2nd Part, Chapter 36, Published by Chaukhambha Publishers
- [21] A Textbook of Kayachikitsa, Dr. P.S. Byadgi, Dr. A.K.Pandey, 2nd part, Published by Chaukhmbha - New Delhi

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