

MANAGEMENT OF HYPERTENSION THROUGH THE LIFESTYLE MODIFICATION

Dr. Gudiya*¹, Dr. Arun Kumar Tripathi² and Dr. P. R. Tiwari³¹PG Scholar, PG Department of Kaya Chikitsa, Gurukul Campus, Haridwar, Uttarakhand, India.²Campus Director And Professor PG Department of Kaya Chikitsa, Gurukul Campus, Haridwar, Uttarakhand, India.³Associate Professor, PG Department of Kaya Chikitsa, Gurukul Campus, Haridwar, Uttarakhand, India.***Corresponding Author: Dr. Gudiya**

PG Scholar, PG Department of Kaya Chikitsa, Gurukul Campus, Haridwar, Uttarakhand, India.

Article Received on 08/12/2022

Article Revised on 28/12/2022

Article Accepted on 18/01/2023

ABSTRACT

A state of complete physical, mental, spiritual, and social well-being is defined as health. Hypertension is the most frequent common disease worldwide. It's also known as the silent killer because most patients are asymptomatic. However, it causes damage to the target organ and is a substantial risk factor for coronary vascular disorders such as stroke and myocardial infarction. It is responsible for about 6% of all deaths in the world. In India, hypertension is directly responsible for 57% of all stroke deaths and 24% of all coronary artery deaths. Hypertension can also cause nephrosclerosis and peripheral artery disease. Modernization and urbanisation have made life easier, but such sedentary and stressful lifestyle have become a threat to humanity. Hypertension is one of the most common lifestyle Hazard of now a day. Ayurvedic texts do not provide a precise definition of hypertension. According to *Acharya Charaka*, such diseases can be treated without the use of nomenclature by determining the involvement of *Dosha*, *Dushya*, *Srotas*, and other factors. The purpose of this study was to determine the elements that cause Essential hypertension as well as its *Samprati* (pathogenesis).

KEYWORDS: *Dosha*, *Dushya*, *Srotas*, *Samprapti*, *Vyana-bala Vridhi*, *Chikitsa*.**INTRODUCTION**

India has been listed by the World Health Organization as one of the countries where the majority of lifestyle problems will occur in the near future. Hypertension is one of the most serious health issues of the time. Stress, obesity, genetic factors, an excess of salt in the diet, and ageing are all variables that contribute to hypertension. Because it rarely causes symptoms before causing damage to the heart, brain, or kidneys, hypertension is known as the "silent killer."^[1] HTN is a condition in which the blood vessels have an abnormally high pressure for an extended period of time. The force of blood pushing against the walls of arteries as it is pumped by the heart produces blood pressure. Hypertension is a major public health issue that continues to be a major source of morbidity and mortality around the world. worldwide mortality and morbidity.^[2] In the year 2000, over 26.4% of the world's adult population had By2025, 29.2% of people are expected to have hypertension.^[3] There is no clear mention of Essential Hypertension in Ayurvedic traditional writings. *Vyana Vayu* is associated with the ejection of blood from the heart through a blood vessel, referred to as "*Sirah*" in *Ayurveda*. The *Vyana Vayu* is responsible for blood circulation.

In Ayurveda

The disease can be explained using *Ayurvedic* principles such as *Dosha*, *Dushya*, and *Srotas*, and other factors. There have been several theories offered as to how *Ayurveda* can explain hypertension, but no standardised and widely recognised perspective of the *Ayurvedic* pathophysiology of this ailment exists. In *Ayurveda*, there are still a lot of questions about this ailment. Thus, this is an attempt to thoroughly understand hypertension and explain it in terms of ayurvedic principles, taking into account all existing viewpoints. Hypertension has been given various names, including *Raktagata Vata*,^[4] *Pitta Avrita Udan* (*su. Ni. 1/35*), *Siragata Vata*,^[5] *Vyana Atibal*,^[6] are some of the names given to hypertension. Before we can understand hypertension, we must first understand *Ayurvedic* blood pressure physiology. The physiological characteristics of blood pressure in *Ayurveda*, which is founded on the *Tridosha* theory.^[7] In *Hridaya*, *Vyana Vayu* performs functions such as *Rasadi Samvahana*, *Prasaran*, *Akunchana*, *Gati*, and *Asrik sravana*^[8] *Vyan Vayu* is stated to be in control of many types of movements. *Vyana Vayu* is associated with the ejection of blood from the heart through a blood vessel, referred to as "*Sirah*" in *Ayurveda*. The heart has its own pacemaker (SA node), which generates electrical impulses that cause the heart to contract during systole. This is due to the *Vata Dosha's* functioning, particularly the *Vyana Vayu* is responsible for blood circulation. The

nervous system's functions have been detailed in the same way as the *Prakrita Prana Vayu* has been discussed. *Prana Vayu* situated in *Murdha*,^[9] The function of the *Prana Vayu* can be linked to the neurological system's vagal inhibition, by managing *Vyana Vayu*, *Prana Vayu* is able to regulate blood pressure. As a result, *Prana Vayu* pathology can result in heart and vascular abnormalities. When the cardiac muscles relax, the diastole is reached. This diastolic blood pressure belongs to the *Kapha Dosha*, namely *Avalambaka Kapha*.

Sadhaka Pitta is difficult to explain in terms of modern physiology; nonetheless, the functions of adrenaline are similar to those of *Sadhaka Pitta*. The adrenal gland is activated and secretes more adrenaline in response to fear, rage, and other emotions, which alters the heart rate and cardiac output, and ultimately raises blood pressure. As a result, *Sadhaka Pitta* might be considered a key component of appropriate blood pressure physiology.

Nidan (etiological factors)^[10]

- 1. Ati Lavana Sevana (Excessive salt intake):** The properties of *lavana rasa* have been characterised by *Vangbhatta* as *Vishyandi*, *Tikshana*, and *Ushna*. When *Ati Lavana* is ingested, it causes *Pitta* and *Shonita* vitiation, as well as an increase in *Rakta* quality. With *Jala* and *Agni Mahabhuta*, *Lavana Rasa* is generated, and one of the roles defined as *Kledana*, which can be connected to sodium ion retention, and an increased quantity of *Rakta* can be linked to excessive blood intake.
- 2. Ati Madyapana (Excessive alcohol intake)** *Ushana*, *Tikshna*, *Sukshma*, *Vishada*, *Ruksha*, *Ashukari*, *Vyavayi*, *Vikashi* are ten qualities of *Madya* which are opposite to the qualities of *Oja*. *Hridya* get involved being the seat of *Oja*.
- 3. Snigdha Bhojana (Fatty diet):** In etiopathogenesis of *Shonita Dusti*, excessive intake of *Snigdha*, *Guru*

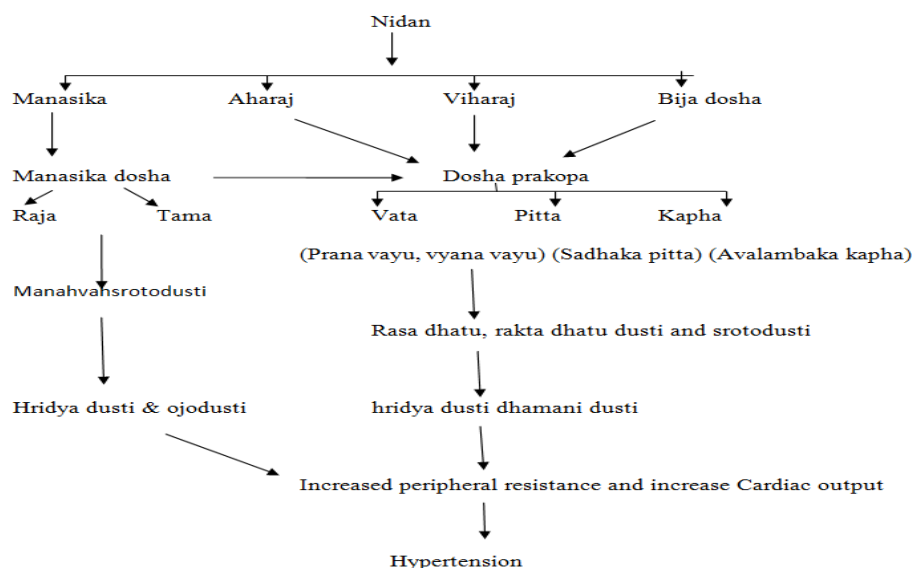
Ahara causes *Jatharagni Vaigunya* and *Medodhatvagni Mandhya* leads to production of *Ama* (*Apakwa Rasadhatu*) and *Apakwa Medovridhi* when deposits in *Rasavaha Srotas* may leads to *Dhamini Praticaya* (arteriosclerosis) causes high blood pressure.

- 4. Manovighata (Stress):** In *Ayurveda*, these *Manasika Bhavas* vitiate *Manas* via *Raja* and *Tama*. As a result, *Prana Vayu* gets *Prakopa* and vitiates *Hridya* which is the seat of *Manas*.
- 5. Age:** *Acharya Sushutra* has mentioned that the nutrients cannot nourish the body which undergone changes due to old age. Old age is *Vatadosha Pradhana Vaya* which due to its *Ruksha*, *Khara*, *Daruna*, *Sheeta Gunas* may cause *Sankocha* and *Kathinya* of the vessels causing high blood pressure.

Pathogenesis of blood pressure in Ayurveda

The vitiation of *Shonita* is caused by *Ati Lavana Sewana*, *Madyapana*, *Snigdha Bhojana*, and *Manovighat*. But *Shonita* being *Dhatu* is not capable of vitiation of *Doshas* independently. The *Doshas* in the *Shonita* that are involved in the expression of elevated blood pressure in an indirect way. The *Sadhaka Pitta* and *Shonita* are vitiates by excessive use of salt and alcohol. The *Avalambaka Kapha* is vitiates by sedentary habits, while the *Prana Vayu* is vitiates by psychological stress. Initially *Prana Vayu* gets *Prakopita*. Because *Prana Vayu* affects *Hridya*, it vitiates *Hridya* and its constituents such as *Vyana Vayu*, *Sadhak Pitta*, and *Avalambhaka Kapha*. Because it is in *Hridya*, *Shonita* is also involved. Exaggerated contractility of the heart is caused by *Prakupitta Avalambaka Kapha*, whereas *prakopaka Vyana Vayu* causes enhanced *Gati*, the force of blood ejection from the *Hridaya*. These events cause blood to be forced out of the *Dhamanis*, resulting in greater resistance due to hardening and narrowing of vessel due to *Pitta Kapha avarana* in the vessels, resulting in elevated blood pressure.

SAMPRAPTI OF HYPERTENSION



Samprapti Ghatak

Doshas: Prana Vayu, Vyana Vayu, Sadhaka pitta, Avalambaka Kapha

Dushya: Rakta, rasa

Agni: Jatharagni, Dhatwagnimandya

Shrotas: Raktavaha, Rasavaha, Manovaha, pranavaha

Udbhavasthana: Hridya, Dhamini

Adhistan: Sarvasharira

Rogamarga: Madhyama rogamarga

Rupa (Sign and symptoms): The feature of the displayed ailment is Rupa when Dosha –Dushya *Sammurchhana* is completed. The sixth *Kriyakala* is Rupa or *Vyakti Avastha* of *Vyadhi*. This is the stage at which the disease manifests itself through subjective and objective symptoms. Ayurveda is a science that looks at

Classification of Hypertension

JNC 7 classification (2003) of hypertension in adult aged >18 years

BLOOD PRESSURE	SBP (mmHg)	DBP (mmHg)
NORMAL	<120	<80
PRE- HYPERTENSION	120-139	80-89
STAGE1 HYPERTENSION	140-159	90-99
STAGE2 HYPERTENSION	>160	>100

Types of Hypertensions^[11]

1. **Essential Hypertension-** Elevated blood pressure with no cause (90-95% of all cases).
2. **Secondary Hypertension-** Elevated blood pressure with a specific cause (10-15 % cases) including renal diseases, endocrine disorders, neurological disorders, and coarctation of aorta.

Risk Factors For Essential Hypertention^[12]

- a) Age (>55 years for men and >65 years for women)
- b) Alcohol
- c) Cigarette smoking
- d) Diabetes mellitus
- e) Excess dietary sodium
- f) Elevated serum lipids
- g) BMI (>30)
- h) Family history
- i) Sedentary lifestyle, less physical activity
- j) Stress
- k) Pre-existing vascular diseases.

Laboratory investigation^[13]

1. Urine examination – for protein, glucose and microscopic (red blood cells/other sediments) Haemoglobin.
2. Fasting blood glucose
3. Serum creatinine
4. Lipid profile
5. Chest radiography
6. Echocardiogram

Complications

1. Cerebrovascular accidents (CVA) or strokes
2. Myocardial infarction
3. Hypertensive cardiomyopathy (heart failure)

indications and symptoms using the *Panchagyanendriya Pariksha* system. *Darshana*, *Sparshana*, and *Shravana Pariksha* are the most important factors in determining blood pressure. However, when a patient experiences sadness or pain in the mind or body, this is known as *Vedana*, and it is always an indicator of *Sansthana* (Symptoms), and symptomatology is not observed in 50% of hypertension patients. However, 50% of patients have distinct clinical characteristics.

- Headache (*shiroruk*)
- Dizziness (*bhrama*)
- Palpitation (*hridayam tamyati*)
- Fatigability (*klama*)
- Insomnia (*anidra*)
- Irritability (anger)

4. Hypertensive retinopathy, nephropathy and encephalopathy
5. Congestion in the lungs
6. Left ventricular hypertrophy
7. Epistaxis
8. Blurring of vision owing to retinal changes
9. Angina pectoris

Siddhanta Chikitsa (Line of treatment)

Chikitsa, according to *Maharshi Charaka*, aims not only at the radical eradication of the disease's causal element, but also at the restoration of the *Doshika* equilibrium.

Nidana parivarjana

The avoidance of causes is known as *nidana parivarjana*. The basic principle in treating any disease is to avoid the etiological factors, which ensures disease prevention as well as control.

Pathya-apathya**Pathya**

- Yava, Shastika, Sali, Godhum, *Kulatha*, Cowmilk, Vegetables such as *Shigru*, *karela*, *Shalgam*, *Gajar*, Upodika, Sunishhanka, Tandulkiya, and fruits such as Amalaki, Draksha, and Kushmanda, apple, pineapple, etc., are all examples of Ahara.
- Prasannata, Samayka Nidra, Vyasana Asevana, Yogasana, and other Vihara Yam-niyam Palana.
- According to Maharshi Charaka, one of the accepted modalities of treatment is Yoga Measure-Satwawajaya. As a result, yoga's management of Satva is extremely beneficial in the treatment of hypertension.
- Reduce intake of oily, salty, sour and spicy food items.

- Weight reduction.

Apathya

- Atilavana Sevana, Madyapana, Bhayadi Sevana, Kshara Sevana, Guru, Abhishyandi, Katu Ruksha, Ushna Ahara, Dahi.
- Excessive use of butter, ghee, chillies (red-green), pickles, Sesame oil, mustard oil, tea, coffee etc.
- Intake of animal fat, processed/oily food items.
- Ratri jagarana, Chinta, Krodha, Diva-Swapana, Agni Santap.

Hypertension diet recommendations

- Lowering sodium consumption (particularly from table salt) helps maintain normal blood pressure by reducing excessive water retention.
- A high potassium diet aids in the removal of excess sodium from the kidneys and the restoration of sodium/potassium balance.
- Adopting a diet rich in fruits, vegetables, and whole grains is one of the most helpful dietary adjustments for lowering blood pressure.
- Avoid dairy, butter, eggs, and foods that are heavy in fat.
- Reducing refined sugar and overly processed foods, as well as caffeine consumption.

CONCLUSION

There is no direct description of Essential hypertension in the *Ayurvedic* classics. As a result, the treatment should be based on the *Dosha-Dushya* relationship. *Acharya* has described *Hridaya* and the process of *Rasa-Rakta Vikshepana* regulation, which is primarily controlled by *Prana* and *Vyana Vayu* and is very closely tied to the circulatory system. It has been determined that Essential Hypertension is a '*Vata* dominating *Tridoshasa Vyadhi*,' with the morbid condition of *Mana*, i.e., a psychosomatic disorder, originating from several elements such as *Dosha*, *Dushya*, *Agni*, *Srotasa*, and so on. For preserving equilibrium and thereby reducing hypertension, *Ayurveda* termed suitable lifestyle and diet management as *Aahar*, *Vihar*. Blood pressure can be controlled with good *Ayurvedic* medication, as well as proper *Aahar*, *Vihar*, and *Yoga*.

REFERENCES

1. WHO report of Prevention and control for Cardiovascular diseases, available from <http://www.sld.cu/.pdf./international> cardiovascular disease statistics, 2001-2002.
2. Moser M, Roccella EJ. The treatment of hypertension: a remarkable success story. *J Clin Hypertens* (Greenwich), 2013; 15: 88-91.
3. Whelton P.K. Global burden of hypertension: an analysis of worldwide data. *The Lancet*, 2005; 365(9455): 217-23.
4. Ashtanga Hridaya, Hindi Commentary by Gupta A.D., 5th Edition, Chaukhamba Sanskrit Sansthana, Varanasi, 1975, Vatavyadhi Nidan, 15/10.
5. Shastri K.N. & Chaturvedi G.N., *Charak Samhita with Vidyotini Hindi Commentary*, 12th edition, Chaukhambha Bharti Academy, Varanasi, 1984; 28/31: 782.
6. Yadavji Trikamaji Acharya, *Charak Samhita with Ayurveda Dipika Hindi Commentary of Chakrapani Datta*, Nirnaya Sagar Press, Bombay, 1941; 28/31.
7. K. Patwardhan The history of the discovery of blood circulation: unrecognized contributions of Ayurveda masters *Adv Physiol Educ*, 2012; 36: 77-82,
8. *Susruta, Nibandha sangraha commentary by Dalhana*, edited by Vaidya yadavaji Trikamaji Acharya, 7 th edition, Chaukhambha publication, 2002; 260.
9. Vagbhata, *Astanga Hridayam*, commentaries of Arunadatta and Hemadri, edited by Bhashagacharya Harishastri Paradakara vaidya, 9th edition, Chaukhamba publication, 2002; 193.
10. *Agnivesha, Charaka samhita Dipika commentary of Chakrapanidatta*, edited by Vaidaya Yadavaji Triamaji Acharya, 5 th edition, Varanasi Chaukhamba Publications, 2001; 124.
11. R Alagappan *Manual of Practicalm Medicine* fourth edition.
12. KV Krishna Das *Textbook of Medicine 2*, 6th edition.
13. *API Textbook of Medicine 1*, 9th edition.