UNDERSTANDING HYPERTENSION IN AYURVEDA

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ABSTRACT

High blood pressure, according to WHO-ISH guidelines, includes both ‘hypertension’ [defined as 140/90 mm of hg or above] and ‘high normal’ [between 130/85 mm of hg and 140/90 mm of hg] blood pressure. The WHO-ISH guidelines class ‘optimal blood pressure’ as less than 120/80 mm of hg while ‘normal blood pressure’ is classed as less than 130/85 mm of hg. Its prevalence varies amongst countries and sub-populations, but now-a-days, hypertension is effecting the population globally. Hypertension is a very strong risk factor for cardiovascular disease. Cardiovascular disease has increased at least two fold due to hypertension [including other risk factors]. Hypertension can be classified into ‘essential’ and ‘secondary’ hypertension. In Ayurveda, Vyana Vata is especially responsible for rakta avrittata[body circulation] in body and Acharya Charak has also mentioned rakta avrittavata Aavranaprakaran of Vatavyadhi. Hypertension can be assumed as very close to this clinical entity along with some variations in condition of dosha, agni etc. in body in different patients. According to Ayurveda the line of treatment for rakta avrittavata is carried out after assessing the predominance of dosha.

KEYWORDS: Hypertension, Rakta-avrittvata, Cardiovascular disease.

INTRODUCTION

Beginning of 21st century brings gift of anxiety and more stress for modern society. This stress and strain of day today life affects ones bodily organs through several psychological mechanism. Among the lifestyle disorders, the hypertension is quite significant disease. More over the complication of this disease are more grievous than the disease itself.

7th report of the JNC on prevention, detection, evaluation and treatment of HTN are. [1]

✓ In those older than 50 years SBP of>140mm of hg is a more important cardiovascular risk factor than the diastolic blood pressure.
✓ Beginning of 115/75 mm of hg, CVD risk doubles for each increase of 20/10 mm of hg.
✓ Pre HTN individuals require health promoting lifestyle modification to prevent progressive rise in blood pressure.

WHO has estimated that HBP causes 1 in every 8 deaths, making HTN the third leading killer in the world. Epidemiological studies demonstrate that prevalence of HTN increasing rapidly among the urban Indian population. Prevalence is lower in rural population but is increasing.

There are so many references in Ayurveda classics, which support the presumption that, the disease hypertension was present in ancestral society, but in a dormant fashion, hence the description are scattered here and there.

DEFINITION

High blood pressure, according to WHO-ISH guidelines, includes both ‘hypertension’ [defined as 140/90 mm of hg or above] and ‘high normal’ [between 130/85 mm of hg and 140/90 mm of hg] blood pressure. The WHO-ISH guidelines class ‘optimal blood pressure’ as less than 120/80 mm of hg while ‘normal blood pressure’ is classed as less than 130/85 mm of hg. Medical science defines HTN as chronic i.e. slowly progressive persistent increase in arterial blood pressure, which can be caused by variety of factor, but regardless of the cause, follows a typical pattern.
Hypertension can be classified in several ways.
✓ Systolic and diastolic Hypertension
✓ Essential and secondary Hypertension
✓ Intermittent and established Hypertension
✓ On the basis of severity

Systolic and Diastolic Hypertension
The Blood pressure is recorded in terms of systolic and diastolic pressures. In Hypertension these may raise individually or together depending upon the pathogenesis. When there is rise of only systolic Blood pressure it is termed asystolic Hypertension. When there is rise of only diastolic Blood pressure it is termed as diastolic Hypertension.

Essential and Secondary Hypertension
This classification is made on the causative factors involved.
✓ Essential Hypertension is also called as primary Hypertension where the cause is unknown.
✓ Secondary Hypertension is caused secondary to some other primary organ disease such as kidney, endocrine gland, CNS, aorta etc.

On the basis of Severity
A commonly accepted classification would be one adopted from the 7th report of the Joint National Committee on detection, evaluation and the treatment of High Blood pressure (JNC 7).

Classification of Blood Pressure on the basis of Severity.

<table>
<thead>
<tr>
<th>BP Classification</th>
<th>SBP (mm Hg)</th>
<th>DBP (mm Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt;120</td>
<td>&lt;80</td>
</tr>
<tr>
<td>Prehypertension</td>
<td>120–139</td>
<td>80–89</td>
</tr>
<tr>
<td>Hypertension</td>
<td>≥140</td>
<td>≥90</td>
</tr>
<tr>
<td>Stage 1 hypertension</td>
<td>140–159</td>
<td>90–99</td>
</tr>
<tr>
<td>Stage 2 hypertension</td>
<td>≥160</td>
<td>≥100</td>
</tr>
</tbody>
</table>

Intermittent and Established Hypertension
Hypertension may be intermittent (labile) or established (sustained), very often the former is merely an early stage of the latter.

Pathophysiology of hypertension
The pathophysiology of HTN remains an area of active research, with many theories and different links to many risk factors.
1. Genetics
2. Autonomic nervous system
3. Renin-angiotensin-aldosterone system

Genetics: Evidence for genetic influence on blood pressure comes from various sources. These are rennin gene, the ANP receptor gene, 11-B hydroxyl’s gene.

Autonomic nervous system
The autonomic nervous system plays a central role in maintaining the cardiovascular homeostasis via pressure, volume, and chemoreceptors’ signals. Exposure to stress increases sympathetic outflow, and repeated stress induced vasoconstriction may result in vascular hypertrophy, leading to progressive increases in peripheral resistance and blood pressure.

Renin-angiotensin-aldosterone system
Another system maintaining the extra cellular fluid volume, peripheral resistance and that if disturbed may lead to hypertension is the renin-angiotensin-aldosterone system.

Ayurvedic aspect
Hypertension can be assumed as very close to the following clinical entity.
✓ Raktagatavata (Ch.Chi.28/31)[2]
✓ Siragatavata (Ch.Chi.28/36)[3]
✓ Pittavrittavata (Ch.Chi. 28/61)[4]
✓ Raktavrittavata (Ch.Chi. 28/63)[5]
✓ Pranavrittadanavata (Ch.Chi. 28/206-207)[6]
✓ Pittavrittadana (Ch.Chi. 28/223)[7]
✓ Pittavrittavyanavayu (Ch.Chi. 28/227)[8]

Nidana
According to basic Ayurvedic fundamentals each disease is an outcome of vitiation of three somatic doshas and two Manasadoshas.[9] After vitiation, these doshas interact with each other and influence various organs of body and produce disease. This is true in case of Essential HTN also.

Aaharajnidaa
Atilavana (Salt), Atimadyapana (alcohol), mansasevan (meat), adhyasanietc are the cause.

Viharajnidaa
Ratrijagarana, divaswapana, vegavidharana, avayama (sedentary life), ativyayama (over exertion), manashetu (anxiety, stress) etc are the cause.

Samprapti(pathophysiology)
In Ayurveda, pathophysiology of any disease is explained in terms of dosha, dushya and mala with their kshaya, vriddhi, and prakopa conditions.

The pathogenesis of Essential Hypertension is not yet clear; a hypothetical pathogenesis has been mentioned in many of the modern texts.

But when we look in Ayurvedic view, it seems to be tridoshajavyadhi with vataas pradhanadosh, pitta and kapha as anubandhadoshas and pradhanadushya involved is raka.

Lakshana (clinical features)
Shiroruk (headache),Bhrama (Giddiness), Hriddravata (Palpitation), Klama (Easy fatigability), Nidranasha (insomnia), Uralashulla (Chest pain), karmanidana (tinnitus), krodha (irritability), raktapitta (epistaxis),

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The incidence of lifestyle diseases like hypertension, diabetes mellitus, dyslipidemia, and overweight/obesity associated with cardiovascular diseases is high on the rise. Cardiovascular disorders continue to be the major cause of mortality representing about 30% of all deaths worldwide. With rapid economic development and increasing westernization of lifestyle in the past few decades, prevalence of these diseases has reached alarming proportions among Indians in the recent years. As Ayurveda is recognized as foremost life science and describes ways to prevent and manage lifestyle disorders, the world is being attracted towards its potential. Ayurveda provides better solution in the

**DISCUSSION**

**daha** (burning sensation), **hralasa** (nausea), **sotha** (oedema), **bahumutrata** (nocturia/polyuria).

**MANAGEMENT**

**In our ancient classics**

Ayurveda is gaining momentum as a successful alternative to the conventional medicinal system through its systematic strategy of curing and preventing diseases using natural resources. Modern medicine often cannot fully remove the disorder and condition becomes chronic. Chronic means that the condition persists over time even with best modern medical treatment. The goal of Ayurveda approach is to enliven the body’s natural healing and self-repairing ability, not only to help cure HTN, but also to prevent disorder and create the highest state of health and well-being. Since hypertension is a vatapradhana, tridoshajayadhi, raktadhatuashushya, virechana, basti and shirodhara the karma that can be adopted. Some of the drugs those are useful in treatment of Hypertension for example.

Brahmivati, brahmirasayana, saraswatarista(they have sedative effects. The madhur rasa and kshaya rasa are used in the treatment of symptoms of hypertensive stages. According to modern science they contain antioxidant) In place of barbiturates yogendra rasa and sarpaganhamishra is used.

The other drugs which can be used are-Gokshura, Guggulu, Gomutra, Arjuna, PunarnavaJatamansi, Shilajatu, Mandukaparni, Vacha, Pippali, Rasona, Aswagandha, Shankhapushpi, Triphala, Guduchi, Tagara etc.

Also different yogas mentioned in Ayurveda classics are-Prabhakaravati, Rasasindhuri, Sarpangandhavati, Gokshuradiguggula, Kaumudharasra, etc.

According to Braunwald (heart 6th ed.2001), reserpine reduces blood pressure by inhibiting vesicular uptake of NE in post ganglionic adrenergic neurons, thereby exposing it to degradation of cytoplasmic MAO.

**On the contrary modern medicine with their known side-effects**

Everyone knows that medicine has made huge advances over recent years and that modern medicine is the best we have ever had. Surely modern medicine is the most technologically advanced, capable and freely available. Whilst it is true that technological advancements have continued to bring new possibilities to modern medicine, many of these ‘advances’ are questionable, either in terms of their necessity, their results and practical application. Its official that doctors kill more people through mistakes and drug side effects.

Various drugs that are used by modern therapy for hypertension are effective in lowering the blood pressure but in turn if they are taken for a longer period of time they prove to have some side effects which leads to complication for instance diuretics given to the patient can cause intense and sudden foot pain (one of the symptom of gout), β-blockers can make one’s heart beat less forcefully and more slowly also with asthma, depression, insomnia and sleep problems.

α 2 receptors decrease the activity in the adrenaline producing part of nervous system. Vasodilators reduce HTN moreover can lead to excessive hair growth, fluid retention, headaches, joint ache and pain, and swelling around eyes.

**Pathya-apathyya**

Since hypertension is amongst the lifestyle disorder so various day today regime has to be followed by the patients and individuals to prevent the disease and further complications of the disease. Acharayashave clearly elaborated the do’s and don’t’s in samhitas related to the disease which in modern times can be clinically correlated with hypertension that include aahar (diet) and vihara(daily regime).

Since Raktachapadhyikata is yapyayadhipathyapathy has a great role to play in the management of it, both as a preventive measure also as supportive measurewith main treatment.

**Pathya (do’s)**

Aahara-Mudga, masoora, palak, methin, jambeera, carrot, Papaya, drygrapes, jeeraka, maricha, jangalamansa, goksheera, takra, madhu, puranashali, yava.

Vihara-Vyayama, dinacharya, sadvrittaparipalana, dharanaoof shokadimanasikavega

**Apathy (don’ts)**

Aahara-Anupamansa, dadhi, salt, excessfattysubstances, alcohol, junk foods, bakery foods.

Vihara-Avyayama, ativayama, vegadharana, diwaswapna, atichinta, atikrodha, ratrijagarana.

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forms of proper dietary management, lifestyle advises, Panchakarma like detoxification and bio-purification procedures, medicaments, and rejuvenation therapies.

**CONCLUSION**

The holistic approach of Ayurveda, treating the patient as a whole, meaning intervention targeted toward complete physical, psychological, and spiritual well-being makes this science a wonderful option in lifestyle disorders. Cardio-vascular disorders are discussed under Hridroga in Ayurveda. Hridaya has been referred to be the site of psyche. Any kind of psychological disturbance will lead to a disturbed patho-physiology of heart. Hence, it has been told to protect the heart from every kind of stress.[10] On the contrary, conventional western medicine deals with the cardio-vascular disorder with single side of somatic disorder. Hence, Ayurveda has an upper edge in treating the disease with emphasis on its root cause. The Ayurvedic physician concentrates on achieving the objective of Ayurveda for promotion of health, prevention and management of disease for a healthy and happy life in the ailing society.

Above discussion is just an example of a disease where modern medicine is so entrenched in its pharmaceutical-based “symptom treatment” paradigm that it has lost all interest in preventing disease, which is exactly what “natural medicine” is all about.

**REFERENCES**

1. 7th report of the JNC on prevention, detection, evaluation and treatment of HTN.