“CRITICAL ANALYSIS OF HYPERTENSION – AN AYURVEDIC VIEW”

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Abstract—Hypertension now becomes a graviorous problem in this present era or we can call it as “Silent Killer”. According to the modern sciences there is some sort of successful treatment available such as diuretic ACE inhibitor but these are having their own complication and limitations. In Ayurveda there is not any direct reference regarding Hypertension but we can found some references where we will get hypertension as a symptom such as as uccharaktachapa, RaktatagaVata, RaktavritaVata, PranavritaVyana etc which are having specific line of treatment including shodhana, shaman as well yoga with pathya for controlling hypertension. So here attempt is made to trace ayurvedic view of hypertension in classics.

Key words: Hypertension, Shodhana, Shamana, Yoga

I. INTRODUCTION

Hypertension (HTN) is a chronic disorder with a low rate of remission and recovery. Diagnostic criteria of HTN are Systolic Blood pressure above 140 mm of Hg and diastolic above 90 mm of Hg.1 HTN is of two types, essential & secondary. Essential hypertension constitutes for 90-95% of hypertensive population whose pathophysiology cannot be directly identified. Life time risk of HTN is 90% in men and women.2 HTN is one of the leading causes of disability or death, due to stroke, heart attack, and kidney failure. With every increase in 20 mmHg of systolic or 10 mmHg of diastolic BP, there is a doubling of mortality from both Ischemic heart disease and stroke.3 Blood pressure (BP) values between 130–139/85–89 mmHg are associated with a more than twofold increase in relative risk from cardiovascular disease (CVD) as compared with those with BP levels below 120/80 mmHg4

Ayurveda community describes essential hypertension as uccharaktachapa, RaktatagaVata, RaktavritaVata, PranavritaVyana, Vyanavrita Prana, Shleshnavrita Vyana etc. Rasayana, medhya, mutra virechaniya, hrudya, sarpagandha and etc are the drugs used by the Ayurveda practitioners and researchers.

Hypertension is an instrumental disease and came into existence by the invention of sphygmomanometer in 1896 by Italian scientist Riva Rocci. After the moment the role of blood pressure has been studied in aetiopathogenesis. There is no any disease description in Ayurveda which completely resembles with hypertension but under certain headings the nomenclature is possible by taking the support of signs and symptoms. Under Raktapradoshaja Vikaras Charaka has explained the whole symptomatology of hypertension.

II. BLOOD PRESSURE

Definition of Blood Pressure: The lateral pressure exerted by blood on the lateral walls of blood vessels over and above the atmospheric pressure.

DEFINITION OF HYPERTENSION: Hypertension is a hemodynamic derangement. (Hursts THE HEART)

Hypertension in adults age 18 years and older is defined as systolic blood pressure (SBP) of 140 mmHg or greater and/or diastolic blood pressure (DBP) of 90 mmHg or greater of any level of blood pressure in patients not taking antihypertensive treatment. (By JNC-VI and WHO/ISH)

BLOOD PRESSURE CLASSIFICATION: 

<table>
<thead>
<tr>
<th>Type</th>
<th>Systolic</th>
<th>Diastolic</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt;120</td>
<td>&lt;80</td>
<td>0</td>
</tr>
<tr>
<td>Pre hypertension</td>
<td>120-139</td>
<td>80-89</td>
<td>1</td>
</tr>
<tr>
<td>Stage 1 HTN</td>
<td>140-159</td>
<td>90-99</td>
<td>2</td>
</tr>
<tr>
<td>Stage 2 HTN</td>
<td>&gt;160</td>
<td>&gt;100</td>
<td>3</td>
</tr>
</tbody>
</table>

RASA-RAKTA SAMVAHANA: 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 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 7th chapter of Sharira by the name of Sira. Therefore it is
essential to discuss about the following organs as a part of circulatory system

 Vyana Vayu Paribhramana:
The Mulasthana of Rasavaha Srotasa is Hridaya (Heart) and Dasha Dhamani (Arteries) (C.Vi.5) With the help of Vyana Vayu heart contracts and do the Vikshepana of Rasa -Rakta in Ekakala (Ugapata) and continuously to all over the body,(C.Ch.15/36). Hence nourishment of all Dhatus(tissues) take place continuously and in circulatory fashion(C.Ch15/21). Here Charaka has indirectly elaborated the theory of closed blood circulation. In this closed circulation certain entities circulate to nourish, to expel out excretory products and thus to maintain the homeostasis of body physiology. (Si.Ni.47-49) There are several diseases invented in recent time, which have no direct reference and nomenclature mentioned in Ayurvedic classics. Essential Hypertension is one of those unanimous diseases.

Physiological Variations:
Age: BP increases in old age- vata vruddhi.
Pregnancy: During the later stages of pregnancy BP usually increase- Rasa vruddhi, rakta vruddhi
Altitude: BP is higher in people living at higher altitude.
Exercise: Systolic BP increases during exercise.- Vata vruddhi
Emotion: BP rises during emotional expressions.- raja vruddhi
Sleep: BP falls during sleep- tama & kapha increased in sleep decrease BP

CAUSES OF HYPERTENSION:
There are various causes which lead to Hypertension are Essential Hypertension (Primary)
Secondary
• Renal
  Acute nephritis
  Interstitial nephritis and pyelonephritis
  Polycystic kidneys
  Renal artery stenosis
• Vascular
  Arteriosclerosis
  Corctation of Aorta
  Thickening
• Endocrine
  Pheochromocytoma
  Cushings Syndrome
  Thyrotoxicosis
  Myxedema
• Neurological
  Intracranial pressure rised
  Lead encephalopathies

1- ENVIRONMENTAL FACTORS: The number of environmental factors have been implicated in the development of hypertension, including :
  Alcohol intake
  Smoking
  Obesity
  Occupation
  Family size and crowding.

ACCORDING TO THE AYURVEDIC POINT OF VIEW ETIOLOGICAL FACTORS LEADS TO DOSHA PRAKOPA IN FOLLOWING WAYS:
  Excessive: Ati-lavana intake leads to increase of Abhisandhi, Sukshma, Ushna and Vyavayi Gunas in the body. (Ch.Ch.Su.13/58)
  Abhishanda leads to increase of Kapha by its Guru and Pichhila Guna to obstruct Rasavahi Siras. (Sha.Pu.4/24)
  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.).
  Ushna Guna leads to Pitta Prakopa.
  All Lavanas 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:
  All Ksharas are very Tikshna, Ushna in nature and vitiates Pitta and Asrika. (A.H.6/151)
  Viruddha Ahara is like Garavisha.(A.H.7/29)
  Nispava vitiates Vata, Pitta and Rakta. (A.H.6/20)
  Masha vitiates Kapha and Pitta. (A.H.6/21)
  Curd increases Medasa, Shukra, Bala, Shleshma, Pitta, Rakta, Agni along with Shopha. (A.H.5/29)
  Ati- Ahara Sevana leads to Yugapata Tridosha Prakopa. (Ch.Ch.3/7)
  Madya pana leads to Pitta Prakopa.

III. SAMPRAPTI (MODE OF MANIFESTATION)
In the disease essential hypertension, 50 % patients remain asymptomatic. Unhappy feeling of body and mind is Vyadhi. According to this definition 50% patients of EHT will not come under the definition of Vyadhitra (hypertensive). In asymptomatic patients of EHT it becomes difficult to make the diagnosis of involved Dosha, Dushya Avastha. Each and every EHT patient has different body and mind constitution and therefore has different thresholds in the manifestation of the symptoms in response to Vyana, Udana and Prana Vayu Prakopa through Avarana or separately, hence we found 50 % patients of EHT asymptomatic. Even though the patients are asymptomatic, for the proper treatment of the disease proper diagnosis is essential. According to Charaka, physician should have proper knowledge of disease and then he should proceed for treatment.(Ch.Su.20/20). In fact diseases are innumerable in varieties depending upon their distinctive features like pain, colour, mode of manifestation, site of manifestation, symptoms and nomenclature. Therefore the diseases that are not
enumerated should be studied according to the factors involved in their manifestation. (Ch.Su.18/42-43).

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

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Clinical Feature</th>
<th>Dosha Predominance</th>
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<tbody>
<tr>
<td>1.</td>
<td>Akshiraga</td>
<td>Pitta</td>
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<tr>
<td>2.</td>
<td>Raktapitta</td>
<td>Pitta</td>
</tr>
<tr>
<td>3.</td>
<td>Raktapitta</td>
<td>Pitta</td>
</tr>
<tr>
<td>4.</td>
<td>Vatahoniata</td>
<td>Vata</td>
</tr>
<tr>
<td>5.</td>
<td>Pipasa</td>
<td>Vata, Pitta</td>
</tr>
<tr>
<td>6.</td>
<td>Gurguratata</td>
<td>Kapha</td>
</tr>
<tr>
<td>7.</td>
<td>Santapa</td>
<td>Pitta</td>
</tr>
<tr>
<td>8.</td>
<td>Daurbalya</td>
<td>Vata</td>
</tr>
<tr>
<td>9.</td>
<td>Shirahashoola</td>
<td>Vata, Pitta</td>
</tr>
<tr>
<td>10.</td>
<td>Klama</td>
<td>Pitta, Vata</td>
</tr>
<tr>
<td>11.</td>
<td>Arati</td>
<td>Pitta</td>
</tr>
<tr>
<td>12.</td>
<td>Krohaprachurata</td>
<td>Pitta</td>
</tr>
<tr>
<td>13.</td>
<td>Buddhissanmoha</td>
<td>Vata, Kapha</td>
</tr>
<tr>
<td>14.</td>
<td>Sweda</td>
<td>Pitta</td>
</tr>
<tr>
<td>15.</td>
<td>Mada</td>
<td>Pitta</td>
</tr>
<tr>
<td>16.</td>
<td>Kampa</td>
<td>Vata</td>
</tr>
<tr>
<td>17.</td>
<td>Tandra</td>
<td>Kapha</td>
</tr>
<tr>
<td>18.</td>
<td>Tamahadarshana</td>
<td>Vata, Pitta</td>
</tr>
<tr>
<td>19.</td>
<td>Bhrama</td>
<td>Vata, Pitta</td>
</tr>
</tbody>
</table>

UPADRAVA AND NIDANAAARTHAKARATTWA OF EHT:

Hridroga: (Ch.Su.17/30-40, C.Su.19/4)
Shiroroga (Cerebrovascular Accident): (A.H.Su.27/3-4)
Sira and Dhamani Kathinya (Atherosclerosis) (Ch.Chi.28/59)

CHIKITSA:

IN RAKTAPRADOSHA THE CHOICES OF TREATMENTS ARE:

(Ch.Su.24/18)
The treatment which alleviates Raktapitta.
Purgation (Virechana) according to Bala and Dosha.
Fasting (Upavasa) according to Bala and Dosha.
Bloodletting (Shonita Sravana) according to Bala and Dosha.

THESE CHOICES CAN BE UTILIZED IN THE TREATMENT OF EHT:

In first choice the treatment will be Sheeta and Pitta Shamaka. Shodhana has also indicated according to the direction of Raktapitta and Bala-Dosha-Pramana (Ch.Chi.4/55-56).

In second Verechana is the choice. There are many references in which Virechana has been indicated in different roots of pathophysiology of EHT (Evam Utthanam). To alleviate main Pitta Dosha and vitiated Rakta, choice is Virechana.

Upavasa is a one type of Langhana. When patient is having less strength then one should proceed for fasting to alleviate the morbid Kapha and Pitta Dosha. (Ch.Su.22/18, 22).

If blood became impure by any Dosha then it should be alleviated by Shonita Sravana i.e. bloodletting.

Blood purification by Raktaprasadaka Chikitsa. Charaka has implied following Chikitsa Karma in general Avarana (Ch.Chi.28/239-241):

MANAGEMENT OF HTN IN MODERN SCIENCE:

Drugs used to treat hypertension includes: Diuretics, Sympatholytics, Vasodilators, Angiotensin converting enzyme inhibitors and Calcium channel blockers

USEFUL PRACTICES:

- Pranayama
  - Anulom Vilom Deep Breathing (15 minutes)
  - Ujjayi Pranayama without Kumbhak (10 minutes)
  - Sheetali Purak followed by Bhramari Rechak (21 rounds)

SADHYA ASADHYATA OF EHT:

The necessary thing having vital role in the management of the diseases is to have the knowledge about curable (Sadhya) and incurable diseases and initiation of the treatment in time by exploring the gained knowledge. (Ch.Su.10/7)

- Curable diseases are of two types: Easily curable (Sukhasadhya) and absolutely irreversible (Anupakrama)
- Incurable diseases are of two types: Fallible (Yapya) and Difficult to cure (Krichhasadhya)

REFERENCES


5- According to J.N.C.VI and WHO/ISH

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http://www.yogapoint.com/yoga-poses/yoga-for-high-blood-pressure.