EVALUATORY STUDY OF ESSENTIAL HYPERTENSION WITH SPECIAL REFERENCE TO SANTARPAN AND APATARPAN HETU

Swati P. Sarnaik¹, Ranjit A. Deshmukh²

¹Assistant Professor, Dept. of Roigndan & Vikritivigyan, MUP'S Ayurved College, Hospital & Research Centre, Degaon, Risod, Washim. 7028020647
²Associate Professor & HOD, Dept. of Rachana Sharir, Dr. Rajendra Gode Ayurved College, Hospital and Research Centre, Amravati. 7028020648

Email: drswararanjitt@gmail.com

ABSTRACT

Ayurveda symbolizes holistic approach towards treating disease and better prevention than cure as its one of the main motto. Hypertension is silent or hidden killer of mankind. An elevated arterial pressure is probably most important public health problem in developed countries. Hypertension is major risk factor for cardiovascular disease, stroke and kidney disease leading to high mortality. It is one among the various life style disorder, this result is form a no. of reason like stress, obesity, genetic disorder, excessive alcohol, salt intake, smoking, sedentary life style, so Classification of hetu in the category of santarpan & apatarpan can help to diagnose the cause of essential hypertension in ayurvedic perspective & thus can help to treat the condition also. This study also reflects that nidanparivarjan is the best remedy for the hypertension. The present study reveals the causes of hypertension in Ayurvedic aspect. Hypertension is primarily diagnosed on basis of systolic and diastolic blood pressure while lipid profile is advocated to study the risk level. The effect of santarpan and apatarpan hetu was observed on systolic and diastolic blood pressure and lipid level to execute severity among them, so outcome of the study is to know the exact cause of hypertension.

Keywords: Hypertension, Ayurvedic pathogenesis, Santarpan- Apatarpan hetu, Blood pressure, Lipid profile.

INTRODUCTION

Human life has been considered as a valuable opportunity to achieve the prime goal of life viz. dharma, artha, kama, moksha. To achieve this, one needs a healthy & calm life. Whole ancient culture tried to achieve all four prime goals of life, so that they had a smooth, sound, safe, steady & healthy life style. On other hand, today mankind is trying to gain good financial status to fulfill all physical desire. However, during ensuing century, there have been tremendous changes in lifestyle. Therefore today’s metaphysical society is facing unsteady, weaken, hard & everyday changing lifestyle. The miserable gift of stressful, hectic lifestyle, diet habit, an environmental changes that man has become victim of many disease like obesity, hypertension, diabetes, AIDS etc. Among which most potent gift is hypertension.
Hypertension is silent or hidden killer of mankind. An elevated arterial pressure is probably the most important public health problem in developed countries. Most sufferers are asymptomatic & as per available report, in more than 95% cases of hypertension underlying cause is not found, such patients are said to have essential hypertension. Essential hypertension is common asymptomatic, readily detectable, usually easily treatable & of uncured them often leads to lethal complications. If it is untreated in the long run, it chiefly affects heart, brain & retina. Thus now days it has become a life threatening disease.

Though, Ayurvedic texts provides no straight reference to essential hypertension, here is an effort made to understand the possible pathogenesis in terms of involved factors like dosha, dushya etc. According to Aacharya Agnivesh naming of a disease is not essential, removal of disease is more important. Aacharya charaka recommended that if a physician is unable to diagnose the disease, he should treat the disease considering rog prakriti, rog adhishtan, rog samutthana. Chakrapanidatta in his commentary includes vyadhi hetu, vitiation of dosha due to these hetu, vyadhi udbhavsthana vyadhi adhishthana & vyadhi vyaktisthana to diagnose & treat the disease.

Understanding Essential Hypertension in the light of Tridoshas principle of ayurveda it is found that it is “vata pitta pradhana tridoshas & raktashrit vyadhi”. In vata prakopak samprapti, Vata being ruksha (dry) & sheeta (cold) in nature may cause stiffness of vessels which increases peripheral vascular resistance & leads to hypertension, due to pitta prakopit hetu, ushna tikshna & drava guna of rakt increases which results in increased blood volume & which exert the pressure on the wall of blood vessel & leads to hypertension, Third mechanism due to kapha prakopit hetu, which cause defect in the vascular smooth muscle (atherosclerotic changes caused by factors like hyperlipidemia ) where the blood vessel lose their normal tone & thus increase pheripheral resistance causing hypertension. Based on these points it can be deduced that in the pathology of hypertension all 3 doshas are involved & which turns affect the rasa & rakta dhatu to cause this condition. Due to these samprapti, vitiation of psychological factor viz. raja & tama is also present. This vitiated doshas leads to vitiation of rasavaha, raktavaha & manovaha srotas.

In the context of “vyadhi hetu”, Aacharya charaka explained santarpaniyam adhyaya which focus the cause of different disease in context of santarpan & apatarpan. Therefore detail literary review can be observed that vata, pitta, kapha, rasa, rakt dushtihetu can be classified in two categories i.e.

1) Santarpan aahar vihar janya hetu
2) Apatarpan aahar vihar janya hetu

ETIOLOGY OF HYPERTENSION-

- Santarpan hetu responsible for Hypertension-
  1) *Ati madhur bhojan-Madhur rasa* is constituted with prithvi & jala mahabhuta , therefore it has guru manda shit, mrudu property. It produce ama & apakva meda & ultimetly causes medovriddhi.these property lead to produce obstruction in rasavaha srotas.
  2) *Ati amla bhojan-Amla rasa* is jala mahabhuta pradhana, it can cause the pitta & rakt dushti.
  3) *Ati lavan bhojan-Lavan rasa* is jala & agni mahabhuta pradhana, it can cause the pitta & rakt dushti.

..
7) **Samashana** –Samashana means taking pathyakara & apathyakara aahara at a time, due to this agnimandya occur and ama is formed which produce obstruction in rasavaha srotas & dhamni pratichaya formed.

8) **Adhyashana-Adhyashana** means taking food before the previously taken meal is digested, it is also one of the causes of shonitaj roga, and due to obstruction of vyam vatagets vitiated which leads to forceful viksepana karma which exerts excessive pressure on rasa-raktavahini.

9) **Ati abhishyandi bhojan**-It can cause kaphaprakop which leads to uplept in sira, dhamani, srotas.

10) **Ati mansa sevan**- It can cause mansa, meda vriddhi & rakta dushti.

11) **Madyapana-Madya** has tikta, kashay rasa, ushna, tikshna, sukshama, vishada, ruksha, ashukari, vyavayi properties. It can cause rakta dushti along with vata pitta dushti, kashay rasa constricts vessels.

12) **Ati nidra-Due to ati nidra kapha & pitta get vitiated & elevation of tamoguna causes manodushi.**

13) **Divaswapa-It can cause jathragnimandya, medodhatvagyi mandya**, due to this ama & apakya meda produced causes medovridhhi. Hridpradeshi pralep vat havana in divaswapa.

14) **Avayayama-It can cause kaphaprakopa & medovridhhi leading to obstruction in rasavaha srotas.**

15) **Acheshta- It can cause kaphaprakopa & medovridhhi.**

16) **Achinta- It is important cause of medoroga, excess apakva meda leads to accumulation of dhamni pratichaya.**

17) **Atiharsha-It can causes kaphaprakopa & medovridhhi.**

18) **Vishaditva-Vishaditva** is a tamas manoguna, it affects mana & hridaya kriya.

- **Apatarpan hetu responsible for Hypertension:**

1) **Ati katu rasa sevan-Vagbhata** explained that katu rasa causes sira sankoch.

2) **Ati tikta rasa sevan**-According to vagbhata it can causes dhatukshaya & vatayadhi.

3) **Ati kashay rasa sevan-Charaka** explained that it can cause strotorodha & sushruta mention that it can cause hridayapida.

4) **Alpabhojan-Due to this diminution of bala, pushiti & oja cause vataprakopa & sankoch of sira occur.**

5) **Shushka bhojan**-It can cause vataprakopa, loses its snigdhata resulting in sira, dhamani sankochka & kathinya.

6) **Ruksha bhojan-Vata prakopa** occurred.

7) **Ati kshar sevan**- It exterts pressure over sira & dhamni raising BP.

8) **Ati langhan-Vagbhata** explains that atilanghana causes hrudshula.

9) **Ati vyayam**- Due to this vata pitta prakopa & raktadushti occur.

10) **Ati jagaran- According to sushruta**, ignoring normal sleep at night aggravates vata-pitta dosha & affects physical, psychological health.

11) **Visham upchara- Due to this damage of vital organ occur & contributes in production of toxins, causes vata prakopa.**

12) **Vegvidharana- Vata prakopa occur which cause of sira sankocha.**

13) **Plavana- Due to this vata prakopa occur.**

14) **Ati atap sevan**- It can cause pitta prakopa & rakta dushti.

15) **Shramadhiyaka- Rakta & mansa kshaya occur, due to which vata, pitta get vitiated.**

16) **Abhighat- In Abhighat vitiated vata mixed with rakta.**

17) **Chinta- Chinta causes ojakshay & rasavaha srotas dushti which affect the rasa rakta samvahan.**

18) **Bhaya- It can cause vataprakopa & sirasankocha.**

19) **Shoka- It is manas vikara affect hriday by increasing cardiac output resulting in Hypertension & vataprakopa, sirasankoch occurred.**

20) **Krodha- It can cause vata & pitta prakopa which leads to vitiation of rakta dhatu.**
SAMPRAPTI GHATAK OF HYPERTENSION-

1) **Nidana-** Vataprakopak, pittaprakopak, kaphaprakopak, rasa dushti, rakta dushti, vataraktadushti, manas dosha dushti nidana are involved.

2) **Dosha-**
   - Vata- vyan, prana, apana, samana
   - Pitta- pachaka, sadhaka
   - Kapha- avalambaka
   - Manasa- raja, tama

3) **Srotas-** Rasavaha, raktavaha, manovaha

4) **Srotodushti prakara-** Atipravrutti, sanga

5) **Agni-** Jatharagnimandya, dhatvagnimandya

6) **Ama-** rasagata

7) **Udhabhava sthana-** Pakvashaya- amashaya

8) **Avayava-** Hrudaya, dhamani, sira

9) **Adhishthana-** Sharir & manasa

10) **Sancharasthana-** Sarva sharira

11) **Rogamarga-** madhyama

12) **Svabhava-** chirkalina

Aim & Objectives:

**Aim-**
To evaluate essential hypertension in terms of santarpan & apatarpan hetu observing its effect on systolic & diastolic blood pressure & lipid profile to execute severity among them.

**Objectives-**
1. To study santarpan & apatarpan hetu of essential hypertension & to execute severity among them.
2. To compare the level of systolic & diastolic BP & lipid level in the patient of essential hypertension due to santarpan & apatarpan hetu.

---

**Material & Method:-**

1) **Material-**
100 patients attending OPD/IPD of kayachikitsa department of SAM, SANGAMNER are selected randomly according to inclusion & exclusion criteria for the study irrespective of sex, religion.

2) **Inclusion criteria-**
   a) Patient between age 30 to 50 yrs irrespective of gender & occupation.
   b) Diagnosed patient hypertension (having hypertension more than 1 year)

2) **Exclusion criteria-**
   a) Patients below age 30 & above 50 yrs.
   b) ANC women & lactating mother.
   c) Patient suffering from malignancy, TB, renal failure, hepatitis, D.M.

2) **Methodology**
   a. Screening of the patients was done.
   b. GROUP A - 50 patients having hypertension due to santarpan hetu were screened & selected.
   c. GROUP B - 50 patients having hypertension due to apatarpan hetu were screened & selected.
   d. Systolic & diastolic blood pressure level in both groups was recorded.
   e. Serum triglyceride & serum cholesterol level in both groups was recorded.
   f. Average values of blood pressure level & lipid levels in both groups were compared.
   g. Assessment of all the selected cases was done according to the following assessment criteria.

**A. Assessment of patients according to hetu**

<table>
<thead>
<tr>
<th>S.N</th>
<th>HETU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ati madhur bhojan</td>
</tr>
<tr>
<td>2</td>
<td>Ati amla bhojan</td>
</tr>
<tr>
<td>3</td>
<td>Ati lavan bhojan</td>
</tr>
<tr>
<td>4</td>
<td>Ati guru bhojan</td>
</tr>
<tr>
<td>5</td>
<td>Ati snigdha bhojan</td>
</tr>
<tr>
<td>6</td>
<td>Ati vidahi bhojan</td>
</tr>
<tr>
<td>7</td>
<td>Samashan (Combine intake of hit, ahit bhojan)</td>
</tr>
<tr>
<td>8</td>
<td>Adhyashana (excessive consumption of food)</td>
</tr>
</tbody>
</table>
B. Assessment of blood pressure levels
1. Systolic blood pressure
2. Diastolic blood pressure

C. Assessment of lipid profile levels
1. Serum Triglyceride
2. Serum Cholesterol
3. HDL Cholesterol
4. LDL Cholesterol
5. VLDL cholesterol

OBSERVATION & DISCUSSION
As such the direct description of hypertension is not available in *ayurvedic* classical text but there is a trend to describe this disorder by literally translating the term by making some prefix to the term *rakta*. In literal translation of hypertension, *rakta* is used as common prefix & different suffix as to denote the pressure like ‘bhara, daba, chapa, sampida’ etc. The process of nourishment of various *dhatu* (body tissue) & excretion of metabolic waste product of *dhatu* are going on continuously within human body. The mechanism is carried out by the *rasaraktasamvahana*[13]. The main organ of this system is *hrudaya*. The circulation of *rasa rakta* is achieved & regulated by various mechanisms. The *rasa rakta* is circulated through the *sira, dhamani*. 
For proper circulation certain amount of pressure is needed. This pressure is generated by pumping action of *hrudaya*, the state of wall of *sira*, size of lumen & volume of blood[3]. For proper supply of nutrients & excretion of waste as per requirements during variations in external & internal environments, the pressure within the *sira* & *dhamani* needs to be change accordingly. This changes of pressure is regulated by the complex interaction of *tridosha* as all the functions of the body are regulated by *tridosha*[2]. The various *dosha* involved in this regulation process are *pran, saman, vyan, apan vata, pachaka* & *sadhaka pitta*, *avalamabk kapha* [4][5]. *Medovaha srotas*[6] is closely related to the lipid metabolism & *manovaha srotas* [7] is also involved in manifestation of Hypertension by psychogenic stress.

The present study is mainly related to the essential hypertension & its etiological factors (*hetu*) in *ayurved* perspectives. It is related to the elaboration of possible causes of essential hypertension available in *ayurved* literature and correlates their cause & effect relationship. *Ayurved* literature does not provide straight reference of essential hypertension. It is in scattered & clue form.

As literary review concludes that essential hypertension is a disease condition mainly realated to *hriday* & its components that is *vata dosha, Pitta dosha, kapha dosha, rasa-rakta dhatu* & its srotas. Considering above factors it can be concluded that essential hypertension is *vata pitta pradhan tridoshaj & raktashrit vyadhi*. Vitiation of these components result into raised blood pressure which is the cardinal sign of hypertension. Therefore the cause (*hetu*) of vitiation of these components are ultimate causes of hypertension but these cause are not listed categorically in *ayurveda* text, so it is very essential to catagorised these causes to provide scientific basis & easy access of the listed *hetu*, so after detail review & study of all these *hetu* it is observed that these cause either create *vriddhi* or *kshaya* & then leads to etiopathogenesis in two way. *Vriddhikar hetu* leads to *santarpan* of *dosha dushya, jatharagnimandya, srotouplep, avarodhajanya samprapti* & *kshayakar hetu* leads to *apatarpan* of *dosha dushya, agnidushti, strotovaigunya, shaithilya of dhamni* & *sira*. Therefore these *dosha, dushya, srotas, agni* vitiating *hetu* can be classified into 2 main categories that is *santarpan aahar vihar janya hetu* & *apatarpan aahar vihar janya hetu* considering pathogenesis of hypertension. *Santarpan hetu* nourishes the *rasadi dhatu* in excessive quantity due to which *rasa, rakta, mansa, meda dhatu* increases in abnormal quantity. Lipids are group of naturally occurring molecules that include fats, waxes, sterol. These lipids resemble to excessive & vitiated *meda dhatu*. In this way maximum consumption of *santarpan hetu* & less metabolism of lipids increases its level in blood. Therefore lipid level are higher in *santarpanoth* patients, continuous sevan of *santarpan dhatu* also causes *kaphaprakopa* & *jatharagnimandya* which result in formation of *aama* & causes obstruction in *srotas*, thus excessively produced *rasadi dhatu*, *aama* & *vikrut medodhatu* obstruct *sira, dhamni* & *srotas* producing atherosclerosis which result in hypertension. In *apatarpan hetu vataprakopa* associated with *pittadushti* is the most important factors for higher blood pressure levels. It can causes *dhatukshay* & vitiate *rakta, mansa & meda dhatu* & vitiated *pitta* increases volume of vitiated blood. *Rakta, mansa, meda dhatu* is related with *sira, dhamni* & *rasaraktasamvahan kriya*, vitiation of *rakta dhatu* due to *vataprakop* causes *kharatva, shaithilya, sankoch of sira & dhamni*. *Sankoch* of sira causes narrowing of lumen, *shaithily of sira* causes loosening in texture. Thus increases volume of vitiated blood when passes through *sankuchit, shitiil*, thickened, narrow *sira* & *dhamni*, it get obstructed producing arteriosclerotic which result in hypertension.

**Statistical Analysis**-

The present study is observational in between two groups with independent variables, so unpaired t- test applied to test significance of observation.
**CONCLUSION**

Classification of hetu in the category of santarpan & apatarpan can help to diagnose the cause of essential hypertension in ayurvedic perspective & thus can help to treat the condition also. This study also reflects that nidanparivarjan is the best remedy for the hypertension. In present study it is observed that, average blood pressure of apatarpan hetu is more common than santarpan hetu while lipid level of santarpan hetu is on higher side. Thus santarpan hetu leads to atherosclerosis while apatarpan hetu leads to arteriosclerosis to cause essential Hypertension.

Ati lavan bhojan is the most common hetu found in 46 patients while chinta recorded in 40 patients it clearly indicates the severity of these hetu. Ati lavan bhojan is aahariya santarpan hetu while chinta is manas apatarpan hetu. Presence of 40 patient with chinta clearly indicate that continuous stressful psychological condition is also equally responsible for hypertension. Highest average value of blood pressure recorded in madyapana patients followed by chinta. Despite of these hetu ati mansa seven, ati katu rasa seven, ati kashaya rasa seven, ati lavan bhojan, ati kshar seven, shramadhikya, ati vidahi bhojan, adhyashan are the hetu contributing in high BP.

As far as lipid concern, serum triglyceride levels found maximum in samashan, serum cholesterol & LDL level in madyapana while VLDL in ati guru bhojan. Despite of these hetu achinta, diwaswap, guru bhojan, lavan bhojan, vidahi bhojan, ati mans seven, atiinidra & amla bhojan contributes in increasing all lipids. It is clear that top 9 hetu increasing lipid levels are from santarpan group while ati kashay rasa sevan is the only hetu of apatarpan which increasing lipid level.

**REFERENCES**

11. Sharma Priyavrata, Charak Samhita (Nidansthana with chakrapanidatta’s Ayurveda Dipika) 5th edition,
Varanasi, Chaukhamba Sanskrit Pratishthan, 2003, Nidansthana, 1/22 p. 473


**Source of Support:** Nil

**Conflict Of Interest:** None Declared