

REVIEW OF RESEARCH WORKS DONE ON HYPERTENSION IN IPGT & RA JAMNAGAR BETWEEN 2001-2016 –REVIEW STUDY

Ankit Vasava¹, Alankruta R.Dave², Jitendra Varsakiya³

¹MD Scholar, ²I/c Head & Associate Professor,

Department of Kayachikitsa, IPGT & RA, Gujarat Ayurved University, Jamnagar, Gujarat, India

³Assistant Professor, Department of Kayachikitsa, J.S. Ayurveda Mahavidhyalaya Nadiad, Gujarat

Email: avasava610@gmail.com

ABSTRACT

Hypertension is defined as “a sustained higher lateral pressure exerted against the arterial walls by virtue of alteration in cardiac output and peripheral resistance”. Essential Hypertension (EHT) is one of those disastrous diseases which are psychosomatic, hereditary and occurring as a result of aging. Hypertension is a major risk factor for the development of cardiovascular disease (CVD). Its impact is greatest on stroke and end stage is renal failure. It is also one of the contributing factors for the development of coronary artery disease (CAD). Western therapy is some sort of successful in controlling this disorder but it has its own adverse side effects. In *Ayurveda* there is no any direct reference regarding Hypertension. For this purpose review work has been done in IPGT&RA on different Ayurvedic formulations and procedure had been carried out to rule out the efficacy of drugs in the management of Hypertension. So here attempt is done to analyze the research work held at IPGT & RA, Gujarat Ayurved University, Jamnagar, Gujarat.

Keywords: Hypertension, *Ucchraktachap*, Ayurved

INTRODUCTION

Cardiovascular diseases caused 2.3 million deaths in India in the year 1990; this is projected to double by the year 2020. Hypertension is directly responsible for 57% of all stroke deaths and 24% of all coronary heart disease deaths in India.¹ Depending on the criteria for the diagnosis hypertension can be said to be present about 18-20% (estimated by WHO) of adult population. Around 50% of the total cases remain undiagnosed and they never

attend any clinic². Hypertension is becoming a common health problem worldwide with increasing prevalence with increasing of risk factors. In Ayurvedic classics there are no any specific terms for essential hypertension mentioned. According to Allopathic science of medicine Antihypertensive drugs like ACE (Angiotensin converting Enzyme), Beta blockers, etc cause so many side effects to the patient. Therefore it is a great need of today to

find out such type of herbal remedy which can control the hypertension of patient without creating any complication or bad effects on body. The physician should try to understand the disease according to *Dosha*, the site of disease manifestation, etiological factors and then initiate the treatment. Ayurvedist of recent era created a new menclature for hypertension like

*Uccha Raktachapa, Raktabharadhikya, Raktagata-vata, Siragata-vata, Pranavrita- Vyan*³, *Udanavrit-vyana, Raktavrit-vyana, Vyanabala vridhhi, Vyanabala Vaishamy* etc. Hence the model of pathogenesis of this disease has been evolved with the help of the *Samprapti* described in *Mada, Murchha* and *Avarana of Vata*.

Table 1: Classification of Hypertension:⁴

Category	Systolic(mm Hg)	Diastolic(mm Hg)
Optimal	< 120	< 80
Normal	120-129	80-84
High Normal	130-139	85-89
Grade 1 HTN (mild)	140-159	90-99
Grade 2 HTN (moderate)	160-179	100-109
Grade 3 HTN (severe)	>or = 180	>or = 110
Isolated Systolic HTN	>or = 140	< 80

When the hypertension is suspected, blood pressure should be measured at least twice during two separate examinations after the initial screening. In Adults, a condition in which the blood pressure is higher than 140 mm Hg systolic or 90 mm Hg of diastolic on three separate readings recorded several weeks apart.

Aims & objectives:

To review previous research work has been done on Hypertension and to study treatment of Hypertension in Ayurveda.

Materials and Methods:

Works carried-out in the various departments of IPGT & RA, Jamnagar at PG levels during 2001-2015 were compiled and screened rational of Ayurvedic therapeutics.

Results and Observation:

1. Pathania Sunilkumar (2001)⁵ –

In this study 28 patients were randomly divided into 3 groups: Group-1: *Takradhara* Group – (n=10). In this group *Takradhara* is given (3 lit/day) for the duration of 2 weeks; Group- 2: *Sarpagandha Vati* group – (n=9) in this group *sarpagandha vati* is given 1 gm/day for the duration of 45 days; Group-3: Combined group – (n=9) in this group both *Takradhara & Sarpagandha vati* is given to the patients. The effect on cardinal symptoms like; Systolic Bp in group 1 (*Takradhara* group – (n=10) showed 5.25% relief, group-2 *Sarpagandha Vati* group – (n=9) provided 16.29% relief and in group 3 Combined group – (n=9) provided 15.24% relief which was statistically highly significant. In diastolic Bp group 1(*Takradhara* group – (n=10) showed 3.52%% relief, group-2 *Sarpagandha Vati* group – (n=9) provided 11.31% relief and in group 3 Combined group – (n=9) provided 13.33% relief which was statistically highly significant. In Headache group

1(Takradhara group – (n=10) showed 56.25% relief, group-2 *Sarpagandha Vati* group – (n=9) provided 66.67% relief and in group 3 Combined group – (n=9) provided 80% relief which was statistically highly significant. In *Bhrama* group 1(Takradhara group – (n=10) showed 50% relief, group-2 *Sarpagandha Vati* group – (n=9) provided 75% relief and in group 3 Combined group – (n=9) provided 100% relief which was statistically significant. In *Atidaurbalya* Group 1 (*Takradhara* group – (n=10) showed 37.50% relief, group-2 *Sarpagandha Vati* group – (n=9) provided 50% relief and in group 3 Combined group – (n=9) provided 37.50% relief which was statistically significant. The study reveals that Group 3 shows better results in reducing the associated symptoms.

2. Bhayal Ramesh (2003)⁶

In this study 32 patients were divided into two groups- *Virechana* group and *Shamana Yoga*. In Group.A (n =17) *Virechana* procedure had been done. *Virechana* was done by a *Virechana yoga* consists of *Trivrut*, *Haritaki*, *Aargvadh*, *Erand Tail*. In Group-B *Shamana Yoga* is given to 15 patients (n = 15) which consists of 7 herbal drugs such as – *Aamlaki*, *Shankhpushpi*, *Jatamansi*, *Arjuna*, *Guduchi*, *Gokshur*, *Punarnava*. These drugs were taken in equal quantity & processed as a *Ghanvati*. The effects of therapy was showed that group A (n =17) *Virechana* provided 20.90% and group B *Shamana Yoga* (n = 15) provided 16.97% relief in Systolic BP which was statistically significant . Similiarly in Diastolic BP group A (n =17) *Virechana* provided 16.97% and group B *Shamana Yoga* (n = 15) provided 18.21% relief. Patients with headache therapy provided result in group A (n =17) *Virechana* provided 87.23% and group B *Shamana yoga* (n = 15) provided 69.02% relief. In *Bhrama* therapy provided result in

group A (n =17) *Virechana* provided 100% and group B *Shamana yoga* (n = 15) provided 64.67% relief which was statistically highly significant . Therapy provided result in *Tamodarshana* group A (n =17) *Virechana* provided 83.51% and group B *Shamana Yoga* (n = 15) provided 50% relief. Therapy provided result in *Shrama* group A (n =17) *Virechana* provided 81.05% and group B *Shamana yoga* (n = 15) provided 77.55% relief. Effect of Therapy provided result in *Anindra* Group A (n =17) *Virechana* provided 93.62% and group B *Shamana Yoga* (n=15) provided 77.55% relief. Group-A (*Virechana* Group) shows comparatively better result in all parameters with compare to Group-B which is also statistically highly significant.

3. Dhanjay Patel (2003)⁷ –

In this study 30 patients of Essential Hypertension were divided into 3 groups - In Group-A *Medhya Rasayan Vati* (which is made of *Medhya* drugs such as *Brahmi*, *Shankhpushpi*, *Ashwagandha*, *Jatmansi*, *Parisik Yavani*) was given to 10 patients (n =10) in three divided doses with *anupana* of milk for the duration of 8 weeks. In Group .B *Kshirodhara* was given to 10 patients (n=10) for 45 min daily in the morning for 21 days. Patients of Group C (n=10) were given combined therapy consisting of both *Medhya Rasayan Vati* and *Kshirodhara*. The effect of trial drug provided results on Systolic BP group A - *Medhya Rasayan Vati* (n =10) provided 16.60%, group B *Kshirodhara* (Dhara of Milk) (n =10) provided 23.82% and group C combined therapy n =10) provided 19.78% relief which was statistically highly significant . Similarly therapy provided results on Diastolic blood pressure group A - *Medhya Rasayan Vati* (n =10) provided 11.84%, group B *Kshirodhara* (n =10) provided 13.82% and group C combined therapy n =10) pro-

vided 12.63% relief. Trial drug showed result on headache in group A - *Medhya Rasayan Vati* (n =10) provided 68.42%, group B *Kshirodhara* (n =10) provided 66.67% and group C combined therapy n =10) provided 71.43% relief. Trial drug showed result on *Bhrama* in group A - *Medhya Rasayan Vati* (n =10) provided 60.77%, group B *Kshirodhara* (n =10) provided 70.41% and group C combined therapy n =10) provided 67.86% relief that was statistically highly significant. Drug showed effect on *Anidra* in group A - *Medhya Rasayan Vati* (n =10) provided 65.40%, group B *Kshirodhara* (n =10) provided 72.50% and group C combined therapy n =10) provided 75.76% relief that was statistically highly significant. Group C showed statistically high significance in all parameters and it also showed comparatively better result in nullifying psychological factors.

Raval Nita (2003)⁸:

Present study was planned to evaluate the efficacy of both the varieties of *Sadabahar* (*Catharanthus roseus*) on the disease Essential Hypertension. *Sadabahar* (*Catharanthus roseus*) finds no mention in Ayurvedic lexicons. Total 22 patients were registered for the clinical trial, out of them 16 patients completed the course of treatment, 9 patients in *Lochnera rosea* group and 7 patients in *Lochnera Alba* group. Group 1 patients were given *Lochnera rosea Churna* and Group 2 patients were given *Lochnera Alba Churna* with simple water as *Anupana* for four weeks. Statistically highly significant result was found in systolic and diastolic blood pressure in both drugs treated group at the level of $P < 0.001$. The systolic blood pressure was reduced by 53.19% and diastolic blood pressure by 81.35% in *Lochnera Rosea* group. Where as in *Lochnera Alba* treated group systolic

blood pressure was reduced by 71.50% and diastolic blood pressure by 91.08%.

Kale Atul (2005)⁹:

For the present study 37 patients were selected, out of which total 12 patients left the study before completion of their full course. Total numbers of 25 patients from two groups have completed their course of treatment. Out of these 25 patients 18 were treated with *Sarpagandhadi Vati* (*Shamana Yoga*) and 7 with *Virechana* and *Sarpagandhadi* (*Shamana Yoga*). First group was *Shamana* group under which *Sarpagandhadi Vati- 4 Vatis* (1gm) in *Vyanodanou Kala* was administered with lukewarm water for one month. Second group was *Virechana* group under which first classical *Virechana* was performed and then *Sarpagandhadi Vati-4 Vatis* (1gm) in *Vyanodanou Kala* was administered with lukewarm water for one month. Follow up was done for two weeks after the treatment. In *Shamana* group, at sitting position, effect on Systolic blood pressure was 45.85%, on diastolic blood pressure - 50%, in supine position effect on Systolic blood pressure was 54.63%, on diastolic blood pressure - 48.69%. In this group overall effect of therapy was recorded as complete relief 22.22%, markedly improved 5.55%, moderately improved 22.22% and improved 33.33%. In *Virechana* group, at sitting position effect on Systolic blood pressure was 49.7%, on diastolic blood pressure - 57.93%, in supine position effect on Systolic blood pressure was 64.5%, on diastolic blood pressure was 66.67%. In this group overall effect of therapy was recorded as complete relief 28.57%, markedly improved 28.57%, moderately improved 00% and improved 28.57%. *Virechana* therapy provides more relief and synergistic effect in the management of essential hypertension when performed before starting the *Shamana Yoga*.

Shah Pragna (2005)¹⁰:

For this part of study 20 uncomplicated patient of essential hypertension were selected randomly. These twenty patients were sub divided in to two groups of ten patients each. In group A patients, *Virechana* was given with *Snuhi Bhavit Katuki* according to the *koshtha* of patients. In group B patients, as a placebo was administrated to the patient. Dose was two tablets, twice in a day & total course completed in 6 weeks. *Virechana* groups provided better relief in cardinal sign and symptoms. *Virechana* group showed better relief in overall improvement in comparison to placebo group. In *Virechana* group, 35% patients had stopped the modern anti-hypertensive medicines, and another 35% patients get mark improvement, and they stopped antihypertensive medicine up to after five weeks of *Virechana* and then they had taken minimized dose of medicine, and 20% patients not getting benefit in persistent rise in B.P.

Boghayata Kamlesh (2008)¹¹:

In this study total 30 patients were registered which equally divided in two groups. Out of 30 patients 15 patients were treated with *Saptaparna Twaka Yavakoota* and 15 with *Sarpagandha Ghanavati*. In group A, *Saptaparna Twaka Kwath*, In the dose of 15gm twice a day for 21 days with the *Anupana* of *sukhoshna jala* was given. In group B, *Sarpagandha Ghanavati*, in the dose of 250mg twice a day for 21 days with the *anupana* of *sukhoshna jala* was given. *Saptaparna* is more effective in Diastolic Blood Pressure (DBP) in supine as well as sitting position in comparison to *Sarpagandha*. *Sarpagandha Ghanavati* was found more effective in Systolic Blood Pressure (SBP) in both positions.

Gupta Salini (2009)¹²:

In this study, total 18 patients were registered, out of which total 4 patients left the study before completion of their full course. Out of these 14 patients 8 were treated with *Gokshuradi vati* (Group A) and 6 with *Methyl dopa* (Group B). *Gokshuradi vati* was given 6gms in 3 divided doses for the duration of 45 days with *anupana* of water with follow up after 1 month. In group B, The dose of methyl *dopa* was decided on the level of diastolic B.P. If diastolic B.P. between 90-100 mm Hg 250 mg B.D., 100-110 mm hg 250 mg TDS, > 110 mm Hg 500 mg TDS was given for the duration of 45 days with the *Anupana* of water with follow up of 1 month. *Gokshuradi Vati* has more percentage of relief on diastolic blood pressure, pedal oedema, headache, disturbed sleep and abnormal weight gain. But on systolic blood pressure, oedema on other body parts and oliguria both drugs have same percentage of relief. In follow up also sustained effect of *Gokshuradi Vati* was seen.

Deshmukh Pravin (2009)¹³:

A patient with persistent blood pressure above 140/90 mm of Hg. was designated as Hypertensive. The randomly selected 20 patients having essential hypertension were subdivided in to two groups. In group A the *Rasayana* therapy was advocated to the patients with named *Rasayana vati*, A combined yoga of *Bramhi*, *Jatamamsi*, *Tagarmool*, *Guduchi*, *Aamalaki*, *Haridra*, *Gokshur* and *Bhringaraj*. Selected *shamana* yoga was given 3gm/day in mild hypertensive patients and 4gm/day in moderate hypertensive patients with water in three divided doses for six weeks. In group B *Sarpagandha Ghana Vati* was given to the patients. Dose was selected 2gm/day in mild hypertensive patients and 3gm/day in moderate hypertensive patients with water in three divided doses for six weeks. In the present trial *Rasayana vati* better results in pacifying

the entire range of symptomatology and mainly the cardinal signs in comparison to *Sarpa-ghandha Ghana Vati* alone. During follow up, blood pressure tended to rise after one week of discontinuation of treatment in both group. Thus it is proposed that the medicines should be administered for longer duration.

Shukla Gyanendra (2010)¹⁴:

Total 40 patients were registered and 33 patients completed the treatment. There were 16 patients treated with *Virechana* and *Arjunadi Ghana vati* (Shamana Yoga) and 17 with *Basti* and *Arjunadi Ghana vati*. Group A, [first *Deepana-pachana* with *Trikatu churna* 3gm with luke warm water, twice a day for 2-3 days. *Snehpana* with *sudhha go-grita* for 3-7 days. *Abhyang swedana* with *bala tail*, 2 times a day for 3 day. *Virechana karma* with *Virechana Kashaya- Trivrit: 100gm*, *Aaragwadha: 50 gm* With *Eranda Taila: 70 ml* *Sahapana: Draksha Hima: 100 ml* and *samsarjana krama* for 3-7 days as per *sudhhi*, then internal medicine with *Arjunadi ghanavati 500mg*, 2tab/bd with luke warm water after meal for 30 days.] Group B [The patients of this group were treated by *kala Basti Karma* [6 *Dashmula Kwatha Niruha Basti 480ml* each and 10 *Dashmula Taila Anuvasana Basti* each, then internal medicine with *Arjunadi ghanavati 500mg*, 2tab/bd with luke warm water after meal for 30 days.]. the difference of improvement in between *Virechana* and *Basti Karma* is statically insignificant but on the comparison of percentage improvement *Virechana* has shown better result. The effects of *Virechana* group were best on SBP, DBP, Bhrama, *Shirahashoola*, *Klama*, *Krodha-prachurata*, *Tamahadarshana*, *Anidra*, *Shrama*, and overall effect. Thus the effect of *Virechana* group is more than of *Basti* group.

Jagtap Madhavi (2010)¹⁵:

83 patients were registered and divided into three groups. 64 completed the treatment. **Group-A-** 21 Patients were given *Makandi Ghana Vati* – 500 mg two *Vati* for three times (3gms / day), after meal for 2 months with Luke warm water as *Anupana*. **Group-B-**23 Patients already on modern antihypertensive drugs whose BP is not well under control were added with *Makandi Ghana Vati* – 500 mg two *Vati* for three times. (3gms / day), after meal for 2 months with Luke warm water as *Anupana*. **Group-C-** 20 Patients of this group were given *Makandi Churna* tablet – 700 mg two *Vati* for three times. (4.2gms / day) after meal for 2 months with Luke warm water as *Anupana*. *Makandi Ghana vati* has moderate anti-hypertensive effect on cholesterol control induced hypertension with regards to both systolic and diastolic blood pressure. The clinical study concludes that *Makhandi Ghana* has comparatively better therapeutic response in lowering blood pressure in comparison to powder and when combined with western conventional treatment.

Shreyash Adhvaryu (2015):¹⁶

Patients will be divided into 2 groups in this clinical trial; Group-A- (Trial Group), Group-B (Integrative Medicine Group). 83 patients were registered and divided into three groups. 64 completed the treatment. **Group-A-** 21 Patients were given Modern antihypertensive drugs added with *Mansyadi Ghana Vati* – 500 mg two *Vati* for three times. (3gms / day), after meal for 2 months with Luke warm water as *Anupana*. **Group-B-**23 Patients already on modern antihypertensive drugs whose BP is not well under control were added with Modern antihypertensive drugs added with *Mansyadi Ghana Vati* – 500 mg two *Vati* for three times. (3gms / day), after meal for 2 months with Luke warm water as *Anupana*.

In Group A, 3 (13.04%) patients got marked improvement, 12 (52.17%) patients got moderate improvement, 8 (34.78%) patients got mild improvement in reducing Blood Pressure. None of the patient reported excellent response or remained unchanged Blood Pressure. In Group B, 1 (4.35%) patient got excellent response, 8 (34.78%) patients got marked improvement, 7 (30.43%) patients got moderate improvement, 5 (21.74%) patients got mild improvement in reducing Blood Pressure. None of the patients had remained unchanged Blood Pressure. In Group A, 6 (26.09%) patients got excellent response, 9 (39.13%) patients got marked improvement, 8 (34.78%) patients got moderate improvement in signs and symptoms of Essential Hypertension. None of the patient got mild improvement or remained unchanged.

In Group B, 8 (38.10%) patients each got excellent response and marked improvement, 5 (23.80%) patients got moderate improvement in signs and symptoms of Essential Hypertension. None of the patient got mild improvement or remained unchanged.

DISCUSSION

Now a day, life style disease like hypertension, Diabetes mellitus, Dyslipidemia, and obesity and many more disease associated with cardio vascular disease which is rising very sharply. As per Ayurvedic perspective, the exact nomenclature of the hypertension is still controversial, but the sign and symptoms of the disease can be understood in terms of *Dosha*, *Dushya*, *Srotas* etc. The reason for acquiring hypertension may be due to *Apathya Aahar* like *Ruksha*, *Ati amla*, *Ati katu*, *Ati snigdha*, *Garista Aahara* and *Apathya Vihar* like *Krodh*, *Chinta*, *Bhaya*, *Divasvapana* which leads to *Agni Dusti* and *Dhatudusti* (*Rasa* and *Rakta*). Having a critical glimpse of previous research works, winding up thoughts

of different schools i.e. Hypertension is nothing but a '*Vata pradhan tridoshaja vyadhi*', be greatly influenced by morbid state of *Mana*. It may therefore be considered as *Sharir* and *Manas roga* (*Ubhayashrita vyadhi*). Modern science also affirms this fact, *sharir* and *satva* (*Mana*) have been designated as the habitats of *vyadhi* by *Acharya Charaka*¹⁷. The symptomatology of hypertension can also be traced in different locations of *avaranas* explained by *Acharyas*. The efforts for tracing hypertension gave rise to different opinions like – *Vyanabala Vaishmya*¹⁸. *Virechana Karma* is indicated for *Avarana*, *Anyonyavarana* (*Vyana* and *Apana*) and *Raktapradoshaja Vikaras*, hence for any probability of etiopathogenesis of EHT, *Virechana* is a beneficial process. *Virechana* therapy provides more relief and synergistic effect in the management of essential hypertension when performed before starting the *Shamana Yoga*.

Manasa *Bhavas* like *Chinta* (worry), *Krodha* (Anger), *Bhaya* (Fear) etc. play an important role in the etiopathogenesis, progression and prognosis of disease as well as response to the treatment of the disease – *Uccharaktachapa*. Hence, that type of drug/therapy should be recommended, which pacify these disturbed *Manasika Bhavas* to calm the mind and relaxed the entire physiology. A better line of management can be offered to the patients, if stress-relieving procedure like *Shirodhara* is given with mental health promoting drugs – *Medhya Rasayana*¹⁹.

CONCLUSION

Today's man is looking towards *Ayurveda* in a search of perfect and safe treatment. Hence to get the perfect management of hypertension without any side effects is a need of present time. If we see the causes and symptoms of hypertension in *Ayurveda* perspective, Most of

the causative factors like *Ushna, Lavana, Katu* etc. Above all studies concluded different types of vitiated *Dosha* and *Dhatu* are responsible for hypertension. Some of the study assumes that due to the abnormality of Vitiated *Vata Dosha*, distraction of *Dhatu Gati (Rasa Gati)* by *Vayu* itself.¹ Some study discussed cardio vascular disorder under *Hridroga. Hridaya* is the site of psyche, so any kind of psychological disturbance will create pathophysiology of heart. Thus it creates symptoms like hypertension.

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