

ANTI-HYPERTENSIVE EFFECT OF VIRECHANA, BASTI KARMA AND SHIRODHARA - A REVIEW

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ABSTRACT

Essential Hypertension (EHT), also known as high blood pressure or arterial hypertension, is a chronic medical condition in which the blood pressure in the arteries is persistently elevated. Cardiac output and peripheral resistance are two basic components involved in the physiology of. Hypertension can be understood in co-relation to *Vatavyadhi*, *Raktagata Vata*, *Rakta Vridhhi* etc. *Ayurveda* symbolises holistic approach towards treating diseases, and prevention is better than cure as its main motto. This paper throws an insight to the antihypertensive effect of *Shirodhara*, *Virechana* and *Basti Karma* it also highlights the mode of action of *Karma*. *Shirodhara*, *Virechana* and *Basti* are having more or less effects in all most all the parameters of EHT.

KEYWORDS: *Basti*, Hypertension, *Shirodhara*, *Virechana*.

INTRODUCTION

The World Health Organization (WHO) has identified India as one of those nations that is going to have most of the lifestyle disorders in the near future. Hypertension results from a variety of reasons like stress, obesity, genetic factors, over use of the salts in the diet and ageing. Hypertension is called a silent killer because it rarely exhibits symptoms before it damages the heart, brain or kidney.¹ Hypertension is an important worldwide public health challenge and remains a major cause of morbidity and mortality worldwide.² About 26.4% of the world adult population in 2000 had hypertension and 29.2% were projected to have this condition by 2025.³ Hypertension is a chronic and often asymptomatic medical condition in which systemic arterial blood

pressure is elevated beyond normal. As such, the heart is forced to work harder to overcome the increased systemic pressure in order to deliver blood to tissues, which puts strain on the heart and arteries. Over the period of time, the additional strain leads to cardiovascular dysfunction and is a primary contributing cause of congestive heart failure, myocardial infarction, pulmonary embolism, cerebral aneurysm and kidney failure.⁴

Though a lot of potent antihypertensive drugs are available today but none of them is free from untoward effects. Especially the elderly population poorly tolerates these drugs. Ideally, an antihypertensive drug should achieve optimum blood pressure control and improve patient's well-being.

Any treatment administered should be directed not only to control blood pressure, but also prevent target organ damage, thereby preserving cardiac and renal functions.⁵ Hypertension is a major risk factor for the development of coronary artery disease, stroke, congestive heart failure and renal disorders.⁶

In this modern era there are several references available for the disease Hypertension in *Ayurveda* but we cannot justify authentically how the allopathic science have strong worldwide acceptance of word Hypertension. Here some different opinion by different Academicians of *Ayurveda* suggested different names to demonstrate the phenomenon like *Raktagata Vata* (YN Upadhyaya-1950), *Shiragata Vata* (Acharya GN Chaturvedi-1962), *Avrita Vata* (Acharya RK Sharma-1966), *Dhamani Prapurnata* (Acharya AD Athavale - 1977), *Rakta Vriddhi* (Acharya GN Chaturvedi-1981), *Rakta Vikshepa* (Shukla JP-1954), *RaktaChapa* (Ravani and Mahaishkar UB-1967), *Rakta Sampida* (Pandey SB -1972),

RESULTS AND OBSERVATIONS

Sunit P. (2001)⁸

The clinical trial was conducted in a randomized sample of 25 patients.

Group	No. of patients	Drug	Dose	Duration
1	10	Medicated <i>Takra</i> (<i>Musta</i> + <i>Amalaki Sidhha</i>)	3liters/day	14 days
2	9	<i>Sarpagandha ghanavati</i>	1gm/day	45 days
3	6	Medicated <i>Takra</i> & <i>Sarpagandha ghanavati</i>	3liters/day & 1gm/day	14 days & 45 days

Results: It was found that **Group 1** rendered 5.25% relief in Systolic blood pressure(S.B.P.) and 3.52% in diastolic blood pressure(D.B.P.). In *Shiroruk* 56.25%, in *Krodhaprachurata* 30% result were found which are statistically highly

Vyana Bala (Triguna B 1974), *Dhamani pratichaya* (Athawale AD), *Rasa Bhara* (Athawale TS 1979), *Rudhira Mada* (Dwivedi VN 1991), *Raktavata* (Sharma PV 1993)⁷ and list goes on with different concept by different *Acharyas* and it makes confusion to upcoming Ayurvedic generation what could be taken and what could not. Until and unless we cannot accept this disease with its causative factors, Pathophysiology, Acuteness, Chronicity, Complications and exact treatment modalities universally. Here some of the references, signs and symptoms can be taken for this disease once it is validated.

AIM: To establish effect of *Virechana, Basti Karma and Shirodhara* in Essential Hypertension(EHT).

MATERIAL AND METHODS

Researches carried out in *Panchakarma* department at Gujarat Ayurved University, Jamnagar, India; between the years 2001-2016 were compiled and screened to revalidate the effect of therapy in Essential Hypertension.

significant(P<0.001). In *Bhrama* and *Swashakrichhata* 50 % results were found which are significant results (P<0.01). In *Hridadravata* 25%, in *Suptata* 50%, in *Atidaurabalya* 50%, in *Klama* 25%, in *Prabhutamutrata* 50%, in *Nidranasha* 25%,

in *Kampa* 0% which are insignificant results ($P > 0.05$). **Group 2** provided 16.29% and 11.31% relief in S.B.P. and D.B.P respectively. In *Bhrama* 75%, in *Klama* 55.56%, in *Swashakrichhata* 78.57%, in *Hridadravata* 78.57% which are highly significant results. In *Shiroruk* 66.67%, in *Krodhaprachurata* 57.14% which are significant. Insignificant results were found in all other parameters. In **Group 3** S.B.P. and D.B.P. was relieved 15.24% and 13.33% respectively which are statistically significant. In *Shiroruk* 80%, in *Bhrama* 100%, in *Tamodarshana* 100% result were found which are highly significant. In *Suptata* 70%, in *Kampa* 50%, in *Krodhaprachurata* 66.67%, in *Swashakrichhata* 50%, in *Nidranasha* 62.50% results were found which are

significant. Insignificant results were found in all other parameters.

Overall effect of the therapy: In Group 1 and Group 2, 10% of the patients showed excellent response but in Group 3, 20% of patients showed excellent response. In this way the overall effect of combined therapy was the best. In Group 2, 50% of the patients showed marked response and 30% showed mild improvement. While in Group 1, 40% of the patients showed marked and mild improvement. In Group 1, 10% of the patients showed no response. Among three Groups, Group 3 provided better result in all the parameters.

Ramesh B. (2003)⁹

This study was carried out on 44 patients, out of these 12 patients dropped out and remaining 32 patients completed the course of treatment.

Group	No. of patients	Drug	Dose	Duration
1. <i>Virechana Karma & Shamana</i>	21	1. <i>Yoga of Trivrita, Haritaki, Aragvadha and Eranda taila.</i> 2. <i>Ghanavati of Shankhapuspi, Jatamansi, Arjuna, Amalaki, Guduchi, Gokshura and Punarnava</i>	As per Bala and Koshtha 4.5 gm/day	1 month
2. <i>Shamana</i>	23	<i>Shamanayoga</i> as per Group 1	4.5 gm/day	1 month

Results: It was found that **Group A** rendered 20.9% relief in S.B.P. and 16.97% in D.B.P. The results were statistically highly significant. In *Bhrama*, *PadaShotha* and *Shirogurav* 100%, in *Shiroruk* 87.23%, in *Daha* 94.34%, in *Shrama* 81.05%, in *Tamodarshana* 83.51%, in *Swashakrichhata* 66.20%, in *Nidranasha* 93.62%, in *Suptata* 60.17% results found which are highly significant. In *Krodhaprachurata* 69.44%, in *Hridadravata* 69.49% results were found which are significant. In **Group B** S.B.P.

was decreased with 16.05% while D.B.P. come down with 18.21% relief, in *Shrama* 57.22%, in *Nidranasha* 77.55% results found which are highly significant. Rest of the parameters showed insignificant results.

Overall effect of the therapy: 52.94% patients of Group A showed excellent response, while it was 20% in Group B. Marked response was observed in 35.29% of patients Group A and 66.66% of patients of Group B. mild response was observed in 5.88% patients of Group A and 6.66%

patients of Group B, while 5.88% patients of Group A and 6.66% patients of Group B showed no response. Among two Groups, Group A provided better result in all the parameters.

Group	No. of patients	Drug	Dose	Duration
A. VirechanaKarma with SnuhibhavitKatuki	10	SnuhibhavitKatuki	As per Bala and Koshtha	6 Weeks
B. Placebo group	10	Yava tablet	2 tab/2 times	6 weeks

Results: It was found that Group A rendered 80 % relief in S.B.P and 50 % relief in D.B.P. The results were statistically highly significant (< 0.001). In **Group A** in Akshiraga 100%, in Vibandha 85.7%, in Atidaurabalya 71.4%, in Swashakrichhata 85.7%, inNidranasha 71.4%, in Supti 70%, in AlpaDharanaShakti 77.70%, in Shirahshoola 60%, in Bhrama 77.77%, in Hridadrava 75%, inKarnanada 88.8%, inSweda 71.5% results found which are highly significant. In Klama 66.6% and in Krodhaprachurata 22.22% results were found which are significant. In Padasotha 50% result was found which was insignificant. In **Group B** 30% relief in S.B.P and 30 % relief in D.B.P. was observed which are statistically significant at (< 0.01). In Shirahshoola 30%, in Hridadrava 50%, in Sweda 75% result was

Group	No. of patients	Drug	Dose	Duration
A.Shirodhara	20	Bala taila	3 liters/day Time:30mins	7 Days for Shirodhara 3 sitingbetween 3 days interval for 21 days (30days)
B.Sarpagandha ghanavati	20	Sarpagandha ghanavati	500 mg each tablet 2 tab/2 times	30 days

Results :In **Group A** relief observed in S.B.P. was 5.34% ,in D.B.P. 4.94% which

Pragna S. (2005)¹⁰

For this part of present study 20 uncomplicated patient of Essential hypertension.

observed which are highly significant. In Swashakrichhata 75%, in Nidranasha 55.55%, in Bhrama 14.2%, in Karnanada 60%, in Akshiraga 62.5%, in Padasotha 66.66% results were found which are significant. Rest of the parameters showed insignificant results.

Overall effect of therapy: In Group A 35% patients showed excellent improvement, 35% patients showed marked improvement and 20% patients showed mild improvement and 5 % patients showed no result. In Group B 40% patients showed marked response, 45% showed mild improvements and 15% patients showed no response. Among two Groups, Group A provided better result in all the parameters.

Chittaranjan K. (2009)¹¹

Total 47 patients were registered, among them 7 patients were discontinued.

was statistically highly significant. The relief was 92% in Krodhaprachurta, 67.86%

in Anidra, 61.90% in Bhrama, 78.26% in Akshiraga, 65.21% in Krodha, 55% in Dhairyra, 73.68% in Chinta, 56% in Smriti, 48% in Tachycardia was observed which was statistically highly significant. The relief of 61.90% in Shirahshula, Reduction of 50% in Shoka, 53.85% was seen in Palpitation which are statistically significant. In **Group B** 3.45% relief was found in S.B.P. and 3.05% in D.B.P. which are highly significant. 66.66% in Chinta, 43.18% in feeling of tension was seen which are highly significant. In rest of the parameters significant results were found.

Overall effect of therapy: 40% and 20% patients gained Marked improvement in

Shrirodhara group and Sarpagandha Ghana Vati group respectively, 50% patients and 35% patients gained in Moderate improvement in Shrirodhara group and Sarpagandha ghanaVati group respectively, while remaining 10% patients and 45% patients gained improvement in Shrirodhara group and Sarpagandha Ghana Vati group respectively, whereas no patients were found in complete remission and Unchanged. Among two Groups, Group A provided better result in all the parameters.

Gyanendra Datta S. (2010)¹²

In this study total 40 patients were registered. Out of which 7 were dropped out.

Group	No. of patients	Drug & Doses
A. VirechanaKarma	16	Virechana Kashaya: 1) Trivrita:100gm2) Aaragwadha: 50gm 3) ErandaTaila:70 ml Sahapana:DrakshaHima:100 ml Shamana: Arjunadi Ghana Vati: 2tab X 2 times (500mg each) in Vyanaudanou (after meal) for 30 days, Anupana-Luke warm water.
B. Basti(In KalaBasti schedule)	17	NiruhaBasti: Makshika 60gm, Saindhva 5gm, TilaTaila 90ml, Shatpuspa kalka 25gm, Dasmula Kwatha 300ml. Total: 480 ml. Anuvasana Basti: Dashmulataila 60 ml. Shamana: As per Group A

Results: In Group A in S.B.P. 5.07%, in D.B.P. 14.48% improvement was observed, 65.62% in Anidra, 66.67% in Shirahshula, 54.54% in Akshiraga, 80% in Raktapitta, 44.44% in Krodha prachurata, 56.25% in Bhrama, 75% in Klama, 72.72% in Arati, 50% in Tandra, 80% in mada, 46.15% in Buddhi Sanmoha, 80% in Tamah Darshana improvement was observed which are statically highly Significant. In **Group B** S.B.P. was improved by 12.05% and D.B.P. by 9.13%, in Shirahashoola 67.74%, in Anidra 69.23%, in Bhrama 68.18%, in

Buddhisanimoha 50%, in Akshiraga 41.67%, in Klama 75%, in Krodhaprachurata 50%, in Arati 77.78%, in Tamahadarshan 100%, in Tandra 66.67%, in Santapa 55.17%, in Raktapitta 80% of relief was observed with highly significant results.

Overall effect of therapy: In **Group A** overall effect of therapy was recorded as 12.5% control relief, marked relief in 18.75%, moderately improved 43.75% and mildly improved 18.75% and no relief was found in 6.25% of patients. In **Group B** overall effect of therapy after was recorded

as 5.88% control relief, marked relief 35.29%, moderately improved 41.17%, mildly improved 17.65% and no relief was found in 0% of patients. Among two Groups, Group A provided better result in all the parameters.

DISSCUSION

VIRECHANAKARMA: As, EHT is *Vata* (*Vyana, Prana, Apana*), *Pitta* (*Sadhaka*), *Kapha* (*Avalambaka*), *Pradhan Tridoshaj Vyadhi* and *Rasa-Rakta Dushya* are main culprits and *Raja-Tama* are also involved. Various etiological factors produce *Dosha-Dushti, Dushya Dushti, Srotodusti, Khavaigunya* and *Agnimandhya* which all leads to EHT. For EHT here *Virechana Karma* was selected. As such *Samprapti vighatan* is said to be treatment.

Aamashya and *Pakwashaya* is *Udbhava Sthana* of EHT. *Virechana Karma* helps for eradication *Dosha* from not only *Aamashya* and *Pakwashaya* but also from whole body. *Virechana* also potentiating and reduce *Agnimandhya*. *Virechana dravyas* by its *Ushna, Tikshna* penetration and infiltrative properties spread in whole body by *Ushna* and *Tikshna* guna lead to break *Srotosanga* and *Srotoupalepa*. *Virechana* may able to expel the excessive *Dravatva* from whole body. *Virechanare*-establish the functional integrity between these three subtypes of *Dosha* through its process, which ultimately help to pacifying *Tridosha*. *Virechana Karma* is major therapy stated for eliminating vitiated *Pitta Dosha*.¹³ It is also capable of mitigating of *VataDosha*.^{14 15} It also eliminates *Kapha Dosha* either associated with *Pitta Dosha* or situated in *Pitta Sthana*, *Virechana Karma* has been

also advised in all *Dhatu-Dushti janya Vikara* viz. *Rasaja, Raktaja Vikara*.¹⁶

Aacharya Sushruta and *Vagbhatta* administered that, it helps to improve intellectual and mental status. Also it Provides strength to the body by increasing strength of *Indriyas* and stabilizing seven *Dhatu*s. Also it helps in potentiating *Jathragani* and decelerating aging process.¹⁷ *Virechanakarma* helps in alleviating three *Doshas*, not only *Aamashya* and *Pakwashaya* but from the whole body. Thus we can say that, *Virechana Karma* is useful, for *Samprapti Vighatan* of EHT.

Hypothesis: *Virechana* process can remove excess of sodium ions and excrete potassium through G.I.T. Watery stool cause depletion of bicarbonate. *Virechana* can eliminate bicarbonate. It can maintain Acid-Base balance too. By the process of *Virechana*, we may say that *Virechana* may give effect on Angiotensin-II enzyme, which helps to reduce retention of salt and water, which decrease extra-cellular fluid from the body, which ultimately decreased blood pressure.

BASTI KARMA: All the *Acharyas* have appreciated *Basti* as a unique form of treatment modality for *Vata*. The possible role of *Kapha* and *Meda* as *Avarana* over *Vyana Vayu* in hypertension justifies the application of *Basti* etc to pacify them.¹⁸ Similarly if *Basti* is given with the drugs which alleviates the vitiation of *Rakta* and *Pitta* than it not only normalizes *Pitta* and *Rakta*, rather helps to control *Rasa* by its virtues. Considering the efficacy, it generates in remodeling the hampered *Doshas*. It is incomparable elimination therapy than the others because it expels the vitiated *Doshas* rapidly as well as it

nourishes the body.¹⁹ *Basti* have shown improvement in S.B.P. & D.B.P. and *Shirahshula*, *Anidra*, *Santapa*, *Bhrama*, *Buddhi Sanmoha*, so the condition where EHT is found associated with above mentioned symptoms and other *Vata Vyadhi* there *Basti* may be selected as the first line of treatment. The review of the studies done on *Basti* helped in concluding that *Basti* is effective in treating the diseases of all *Srotas*. The review also showed that the *Basti* was effective in treating the *GataVatas*. Hence *Basti* can be considered as “*Ardha Chikitsa*” or “*Poorna Chikitsa*”.²⁰ *Basti* followed by *Shamana* used in this research may be used as good treatment modality for the management of the EHT.

SHIRODHARA: In *Ayurveda*, *Shirodhara* is a very important therapy in which pouring of any liquid on the forehead from a specific height and specific period continuously and rhythmically, due to continuous and rhythmically pouring of liquid lead to state of concentration and enhance the release of serotonin and produces chemical substance like acetylcholine and small amount of acetylcholine causes fall of blood pressure and supine position also helps in relaxation. *Shirodhara* is also a purifying and rejuvenating therapy designed to eliminate toxins and mental exhaustion as well as relieve stress and any ill effects on the central nervous system and pacifies the aggravated *Vata Dosha* in *Shirah* which helps in relaxing the nervous system and balancing the *Prana Vayu* and *Vyan Vayu* around the head and *Vyan Vayu* itself is responsible for circulation of blood in the body, so we can say that *Shirodhara* is quite

effective for hypertension. If *Taila* is used in *Shirodhara* then *Taila* is having *Vatahara* and *Snigdhatva* properties which helps *Tarpaka Kapha* in proper facilitation and sound connection of *Indriyas* and *Vishaya* which was deranged earlier by aggravated *Vata*. Active ingredients of *Taila* penetrate into the circulation via for- head and produces *Vatahara* effect. However *Taila* produces lubrication and nutrition. Hence *Shirodhara* facilitates for better working by its *Medhya* effect.

As per Modern science Local application as Ointment may pass through the Stratum corneum into blood vessel and producing desirable effects by reaching the target organ. The continuous pouring of Liquid in relaxed and comfortable position has an additional effect which can be compared to cradling of Mother to a child. This function act as a Sedative and Soothing effect for the Brain and produces Sleep.

Materials used for *Shirodhara* is always warm which causes vasodilatation of all the channels and thereby improving their circulation which in turn improves the blood circulation of Brain. This improves the higher intellectual functions also. So an improvement in psychic symptoms is achieved. Improvement in circulation to hypothalamus also improves the function of Autonomic Nervous System as its stimulation during stress causes many physiological disturbances.

Effect on Chakras: *Shirodhara* stimulates *Agnya Chakra* thereby improving the functions of mind which is vitiated in Stress as it is the place of subtle mind. *Shirodhara* acts at this level correcting their functions.

Effect on Autonomic Nervous System:

Shirodhara may also have Alpha Adrenergic blocking effect and can thus block certain actions of adrenaline and nor adrenaline. *Shirodhara* may also act on the adrenergic neuron probably produce their effects by modifying the synthesis storage and uptake mechanisms of noradrenaline. **Regulation of emotional and behavioural patterns:** Together with the limbic system with the hypothalamus regulates the feeling of rage, aggression, pain and pleasure and behavioural patterns of sexual arousal. Ultimately it can be postulated that *Shirodhara* may be having some effect on hypothalamus resulting in decrease of most of the psychic and somatic disorders. By affecting in all these ways, *Shirodhara* gives results in EHT.

CONCLUSION

Considering all above views it can be concluded that *Panchakarma* procedures e.g. *Virechana*, *Basti* and *Shirodhara* are effective in the Management of EHT. *Virechana* is more effective when there is involvement of *Pitta* and *Rakta Dushti* is there because *Virechana* is having prime effect in *Pitta Dosha*. *Basti* is more effective when there is *Avrita Vata* by *Meda*, *Kapha* etc and *Kevala Vataja* involvement is there. EHT is also concerned with emotional status of the individual, in that situation *Shirodhara* plays major role.

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