



Management of essential hypertension through Basti Karma: A case study

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Abstract: Stroke, myocardial infarction, vascular disease, and chronic renal disease are some of the most severe complications that can arise from hypertension. High blood pressure is defined as a systolic reading of 140 mm Hg or more, a diastolic reading of 90 mm Hg or more, or the need for antihypertensive medicine to control either reading. Primary/essential hypertension has no known aetiology, and secondary hypertension, which occurs due to another disease process, are the two main categories into which hypertension can be placed. Hypertension incidence and prevalence look very different in underdeveloped and developed nations. Hypertension in India has increased between three and six-fold among urban dwellers and ten and thirty-fold among rural dwellers. It is estimated that 600 million people are affected worldwide. Hypertension can be correlated with a vata prakopa janya vyadhi involving hridaya, rasavaha srotas, raktavaha srotas etc. Basti karma is the primary treatment for vata dosha. This case study demonstrates the efficacy of basti karma in management of vital hypertension by considering vata dosha, hridaya and rasa-rakta vaha srotas. The present case report emphasizes the potential of Basti Karma, as a supplementary therapeutic approach for the management of critical hypertension. This statement highlights the significance of personalized treatment strategies and comprehensive methodologies in improving patient outcomes and overall quality of life. Additional investigation and expanded clinical studies are necessary to authenticate the results and prove the effectiveness and safety of Basti Karma in the therapy of hypertension. Incorporating ancient practices such as Basti Karma into contemporary medical procedures can enhance the comprehensiveness and efficacy of hypertension therapy approaches.

Introduction

High blood pressure, or hypertension, is a major worldwide health issue because of its pervasive nature, close link to cardiovascular disease, and potential for disabling sequelae. It has a massive impact on healthcare systems and human well-being, affecting millions of people worldwide. Most people with hypertension have essential hypertension, characterized by persistently high blood pressure with no apparent explanation. Conventional pharmacological therapies exist, but many

patients still struggle to maintain adequate blood pressure management for various reasons, such as pharmaceutical side effects, patient compliance, and physiological complexity. As age advances, systemic blood pressure (BP) rises, and cardiovascular disease incidence is closely related to average BP (Luft, 1998).

In most cases of hypertension, the exact etiology cannot be determined. Essential hypertension describes this subset of patients. The exact cause of essential hypertension is still unknown, but many known risk



factors exist. High blood cholesterol is a key risk factor for hypertension (Alexander and Meena, 2019; Colledge et al., 2014). This is because of the narrowing of blood vessels by the deposition of cholesterol plaques in the vessel walls.

There has been an increasing scholarly focus on complementary and alternative medicine (CAM) strategies for the management of chronic illnesses such as essential hypertension in recent times. The aforementioned techniques comprise a wide array of traditional therapeutic systems that place emphasis on a comprehensive viewpoint about health and overall well-being. Ayurveda, a traditional system, has garnered interest for its potential in treating hypertension. Ayurveda, a time-honored medicinal system originating from India, presents a holistic methodology towards well-being, centring on the equilibrium of the body's energies known as doshas, to foster harmony and avert ailments.

According to Ayurveda, hypertension can be correlated with vata prakopa janya vyadhi which has involvement of hridaya, rasa vaha srotas and rakta vaha srotas. Vyana vata is responsible for circling the rasa dhatu from the hridaya to the different body parts through rasavahi dhamanis. This is similar to the blood circulation from the heart to different parts of the body through the arterial system. Prakopa of vyana vata due to different vata prakopa nidanas will lead to its increased bala and hypertension. Avarana is one of the two major causes of vata prakopa and the avarana by vitiated medo dhatu to the gati of vyana vata can be correlated with the role of cholesterol in developing hypertension (Acharya, 2017; Oscar et al., 2000).

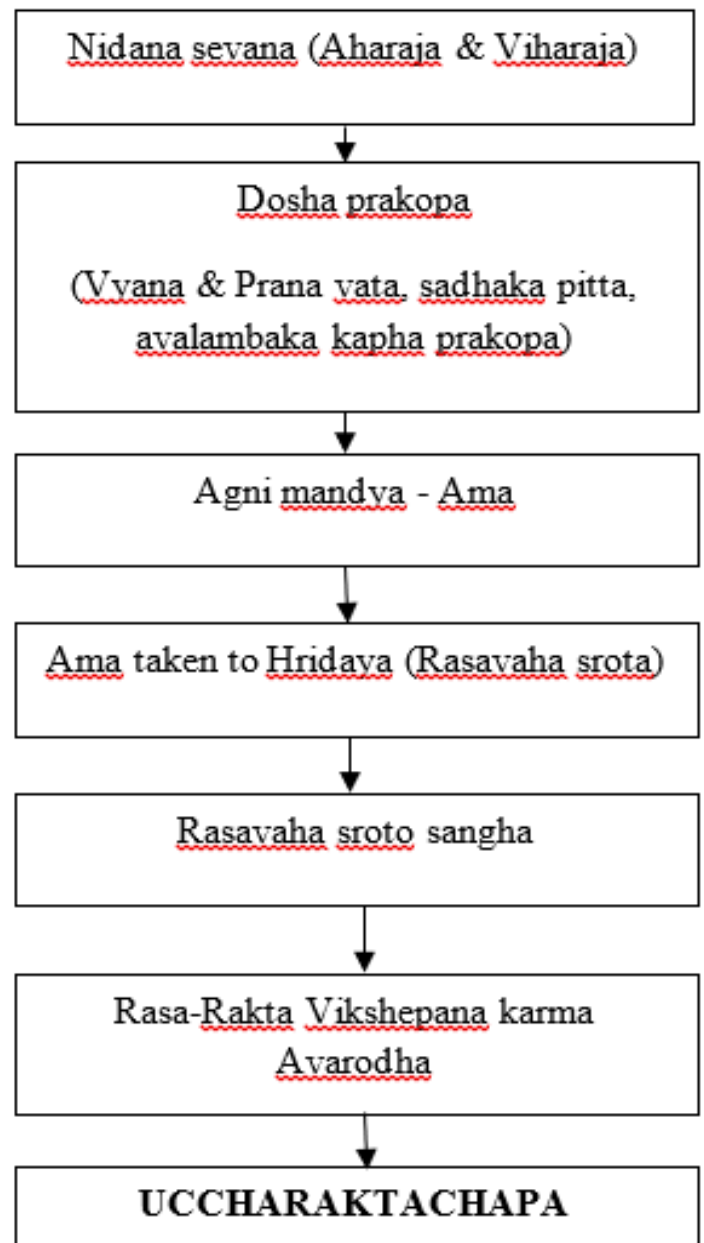
Basti Karma is considered to be a prominent treatment within the realm of Ayurveda. Basti Karma is a therapeutic procedure that entails using herbal enemas with medicinal properties to purify the colon and reinstate the equilibrium of the doshas, hence fostering holistic health and wellness. The utilization of Basti Karma in treating many health conditions, including digestive diseases and musculoskeletal illnesses, has been a longstanding practise. However, its potential application in managing essential hypertension offers a captivating area for further investigation. Basti Karma has the potential to provide a new perspective in managing hypertension by focusing on restoring the body's internal equilibrium and optimising physiological processes, so serving as a valuable adjunct to conventional therapeutic interventions.

This case study examines the utilization of Basti Karma as an adjunctive therapeutic approach in treating essential hypertension. This study focuses on doing a

comprehensive evaluation, devising a treatment strategy, and executing the Basti Karma procedure for a male patient in his middle age who has encountered inadequate blood pressure management using conventional pharmaceuticals. This case study aims to provide insight into the possible advantages and difficulties related to the utilization of Ayurvedic therapies, such as Basti Karma, to improve the management of hypertension. Furthermore, the research highlights the significance of personalized therapeutic interventions and comprehensive methodologies in tackling the intricacies of critical hypertension.

In this case study, manjishta kshara basti and dadimadya ghrita anuvasana basti were given to the patient in Kala basti schedule (Table 1), and the improvements noted in the patient's condition were promising.

Samprapti



Timeline

Table 1. Timeline of study from admission to discharge

10-07-2019	Admission Patient complaints of recurrent headache, body ache, restlessness, dizziness and fatigue. BP - 150/100 mmHg
11-07-2019	Treatments started Sadyo virechana with gandharvahastadi eranda taila 50 ml + warm water 8 vegas
12-07-2019 to 20-07-2019	Treatments Anuvasana basti with Dadimadya ghrita – 70 ml Niruha basti – Manjishta kshara basti in modified kala basti schedule
21-07-2019	Discharge

Narrative

A 40-year-old obese male businessman who runs a hotel visited SDM Ayurveda Hospital on 10/07/2019 with a chief complaint of recurrent headaches for 1 year. Headache used to increase during the working hours. He was also suffering from body aches, restlessness, fatigue and dizziness on and off. For the same complaints, he visited an allopathic hospital and was diagnosed with essential hypertension; serological tests revealed increased cholesterol levels. He followed irregular medications, and his BP was found to be high during the checkups and was between 160/110 mmHg and 140/100 mmHg. On the day of the visit, BP was 150/100 mmHg at 10 am. His family history was negative for hypertension. The patient was admitted for further evaluation and treatment. A balanced Nutritional Diet along with special herbs (Table 2) was provided to the patient during treatment (Figures 1 and 2) (Table 3). In Table 4, the ingredients of Dadimadi Ghrita were tabulated. After treatment, significant improvements were observed in the patient's condition (Table 5).

Table 2. Diet advised

Pathya	Time	Dose
Mudga yusha (green gram gruel)	8 am	250 ml
Takra (buttermilk)	11 am	200 ml
Yava rotika boiled vegetables	2 pm	2 roti + 100 grams
Jeeraka kashaya (decoction prepared with jeera)	5 pm	100 ml
Ragi peya (finger millet gruel)	8 pm	200 ml



Figure 1. Diet for treatment of high blood pressure (Source: Sharda Ayurveda, Google Images)



Figure 2. Ayurvedic herbs for controlling high cholesterol (Source: Sharda Ayurveda, Google Images)

Treatments done

1. Sadyovirechana with Gandharvahastadi eranda taila 50 ml + warm water
2. Anuvasana basti with Dadimadya ghrita (Table 4) 70 ml
3. Niruha basti

Makshika – 50 ml

Saindhava lavana – 12 gm

Sneha – Dadimadya ghrita – 70 ml

Kalka – Triphala – 20 gm

Kwatha – Manjishta kwatha – 200 ml

Gomutra – 100 ml

Table 3. Flow of Treatment along with daily observations

Date	Treatment	Observations
10-7-2019	Patient admission	Bp 150/100 mm Hg Body weight – 93 kg
11-7-2019	Sadyo virechana with gandharvahastadi eranda taila 50 ml + warm water 8 vega observed	BP – 140 / 100mm Hg Head ache +++ Body ache ++ Fatigue +++ Restlessness ++ dizziness +
12-7-2019	1. Anuvasana basti with dadimadya ghrita 70 ml 2. Niruha basti – Manjishta kshara basti in modified kala basti schedule	BP – 140/100 mm Hg Head ache+++ Body ache++ Fatigue++ Restlessness + dizziness+
13-7-2019	1. Anuvasana basti with dadimadya ghrita 70 ml 2. Niruha basti – Manjishta kshara basti in modified kala basti schedule	BP – 140/100 mm Hg Head ache+++ Body ache++ Fatigue++ Restlessness + dizziness+
14-7-2019	1. Anuvasana basti with dadimadya ghrita 70 ml 2. Niruha basti – Manjishta kshara basti in modified kala basti schedule	BP – 130/90 mm Hg Head ache+++ Body ache++ Fatigue++ Restlessness + dizziness+
15-7-2019	1. Anuvasana basti with dadimadya ghrita 70 ml 2. Niruha basti – Manjishta kshara basti in modified kala basti schedule	BP – 130/90 mm Hg Body weight – 88 kg Head ache+++ Body ache++ Fatigue++ Restlessness + dizziness+
16-7-2019	1. Anuvasana basti with dadimadya ghrita 70 ml 2. Niruha basti – Manjishta kshara basti in modified kala basti schedule	BP – 120/90 mm Hg Head ache++ Body ache+ Fatigue+ Restlessness + dizziness+
17-7-2019	1. Anuvasana basti with dadimadya ghrita 70 ml 2. Niruha basti – Manjishta kshara basti 3. in modified kala basti schedule Anuvasana basti with dadimadya ghrita 70 ml 4. Niruha basti – Manjishta kshara basti in modified kala basti schedule	BP – 130/90 mm Hg Head ache++ Body ache+ Fatigue-absent Restlessness - absent dizziness-absent

18-7-2019	1. Anuvasana basti with dadimadya ghrita 70 ml 2. Niruha basti – Manjishta kshara basti in modified kala basti schedule	BP – 130/90 mm Hg Head ache++ Body ache+ Fatigue-absent Restlessness - absent dizziness-absent
19-7-2019	1. Anuvasana basti with dadimadya ghrita 70 ml 2. Niruha basti – Manjishta kshara basti in modified kala basti schedule	BP – 130/90 mm Hg Head ache++ Body ache+ Fatigue-absent Restlessness - absent dizziness-absent
20-7-2019	1. Anuvasana basti with dadimadya ghrita 70 ml 2. Niruha basti – Manjishta kshara basti in modified kala basti schedule	BP – 130/80 mm Hg Headache - absent Body ache- absent Fatigue-absent Restlessness - absent dizziness-absent
21-7-2019	Discharge	BP – 130/80 mm Hg Body weight – 84 kg Headache - absent Body ache- absent Fatigue-absent Restlessness - absent dizziness-absent
+ = Positive; ++ = Highly Positive; - = Negative		

Table 4. Ingredients of Dadimadi Ghrita

Sl. No.	Ingredients	Latin Name	Part Used	Properties
1	Dadima	<i>Punica granatum</i> linn.	Fruit	Hridya, raktavardhaka
2	Dhanyaka	<i>Coriandrum sativum</i> linn.	Seeds	Deepaka, pachaka
3	Chitraka	<i>Plumbago zylanica</i>	Root	Agnimandyahara , deepana
4	Shunti	<i>Zingiber officinalis</i> Roscoe	Root	Amapachaka (Digests Ama)
5	Pippali	<i>Piper longum</i> linn	Fruit	Raktavardaka
6	Ghrita	Cow ghee		Vata pittahara

Table 5. Observations of patient's complaints

Sl. No.	Complaints	Before Treatment	After Treatment
1	Blood Pressure	150/100 mmHg	130/80 mmHg
2	Body weight	93 kgs	84 kgs
3	Total cholesterol	260 mg/dl	212 mg/dl
4	LDL cholesterol	178 mg/dl	149 mg/dl
5	Triglycerides	312 mg/dl	280 mg/dl
6	Headache	Present	Absent
7	Body ache	Present	Absent
8	Fatigue	Present	Absent
9	Restlessness	Present	Absent
10	Dizziness	Present	Absent

Discussion

Renovascular disease, renal failure, pheochromocytoma, aldosteronism, and other secondary causes of high blood pressure are absent in people with essential hypertension (Das et al., 2005). Obesity, high blood cholesterol levels, insulin resistance, excessive alcohol consumption, excessive salt consumption, becoming older, leading a sedentary lifestyle, experiencing stress, not getting enough potassium, and not getting enough calcium are all risk factors that raise blood pressure (Golwalla, 2014). High cholesterol level in the blood leads to atherosclerosis and narrowing of the blood vessels, leading to hypertension (Paul et al., 2023). This is correlated with medo avarana to the gati of vyana vata. Hence the treatment adopted concentrated on relieving the avarana to promote normal gati of vyanavata (Mhatre et al., 2023).

As a result of this line of management, a significant reduction was noted in the blood pressure, body weight, serum cholesterol levels and symptoms also (Naram et al., 2023). Sadyo virechana was given with gandharva hastadi eranda taila. For vata dosha, snigdha and mrudu virechana are indicated. Eranda taila is the best snigdha virechana dravya. This helped in vatanulomana and koshtashudhi before the basti karma (Chitra, 2023).

Basti is considered to be ardha chikitsa for vata dosha. Though the medicine is given through the anal route, basti is said to be effective in diseases pertaining to the whole body. Ksharabasti is a type of rukshabasti which is indicated in the medo pradoshaja vikaras. It possesses kapha medohara, karshana and lekhana properties. These properties might have helped in reducing body weight, and cholesterol levels. Manjishta is known for its action on raktavaha srotas and it is rakta prasadhaka. Manjishta kwatha, along with gomutra, triphala kalka helped treat the atherosclerosis.

Anuvasana basti was given with dadimadya ghrita. Dadimadya ghrita is explained in pandu roga chikitsa and is indicated in hridroga so it affects cardiac functions. Dadima has amlarasa which is vatahara and hridya. Pandu roga is a rasa pradoshaja vyadhi. Hence the ghrita acts on rasavahi dhamanis and facilitates the smooth passage of vyana vata (Upadhyay et al., 2023).

Conclusion

In this case study, the subject developed hypertension due to risk factors like obesity and hyperlipidemia. The lumen of the blood vessels gets narrowed due to atherosclerosis, which leads to hypertension. The lifestyle and daily routine of the subject were favorable to the development of hyperlipidemia and hypertension. This

can be correlated with medovardhaka nidanas leading to medo vridhi which in turn causing avarana to vata. Hence the treatment was planned in such a way that it should do medohara, vatahara and hridya actions. Manjishta kshara basti and dadimadya ghrita anuvasana basti shown significant reduction in blood pressure, body weight, serum cholesterol levels and symptoms.

This case study serves as a first exploration into the possibility of Basti Karma therapies in the management of essential hypertension. Although considerable progress has been achieved, it is crucial to do more research in order to ascertain the precise relevance of Basti Karma and other comparable treatments within the context of evidence-based healthcare practices. Incorporating ancient healing systems such as Ayurveda into the evolving landscape of medical paradigms has the potential to offer novel opportunities for enhancing patient outcomes and promoting a holistic approach to managing hypertension. Using Ayurvedic techniques such as Basti Karma in conventional medical treatment presents potential avenues for a more inclusive and holistic strategy in managing critical hypertension. The integration of traditional healing systems with contemporary medicine can facilitate the development of novel treatment approaches that prioritise personalized care and the overall well-being of patients. Integrative models have the potential to not only optimize blood pressure management but also boost patient adherence, mitigate adverse effects associated with medication, and even impede or postpone the advancement of more serious cardiovascular problems.

Conflict of interest

The authors declare that they do not have any known conflicting interests in publishing the work.

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