Role of *Prapaundarikadi Tailam Abhyangam* (Massage) in Hypertension

Tripti Lokesh¹* and Amarnath Shukla²

¹Department of Panchakarma, Gaur Brahman Ayurvedic College and Hospital, Rohtak, Haryana, India
²Department of Kayachikitsa, Gaur Brahman Ayurvedic College and Hospital, Rohtak, Haryana, India

Abstract

Hypertension is becoming common ailment nowadays. Hypertensive patients are becoming dependent upon anti-hypertensive drugs. But these drugs are controlling blood pressure not uprooting it. In *Ayurveda* hypertension can be correlated with vitiated *Vata Dosha* along with *Pita Dosha* or *Kapha Dosha*. *Dhatu* affected may be *Rasa*, *Rakta* or *Meda Dhatu*. *Vata* can be considered as basic *Dosha* in hypertension. A case study was done on hypertensive patient to assess role of *Abhyangam* of *Prapaundrikadi Tailam* to cure hypertension. *Prapaundrikadi Tailam* was chosen as it can control both *Vata-Pita*. Patient was having hypertension for nearly five years. He was given *Abhyangam* of whole body for one month during evening time. It resulted into controlled heart rate, blood pressure and sound sleep.

Keywords

*Abhyangam*, *Dhatu*, *Dosha*, *Hypertension*, *Meda*, *Prapaundrikadi Tailam*, *Rakta*, *Sparshan*, *Vata*
INTRODUCTION

In Ayurveda there is no mention of hypertension. But it has mentioned many diseases which can be compared with hypertension. Many scholars have compared the hypertension with following diseases of Ayurveda - Raktagata Vata, Kaphapita Avrita Vyana Vata, Sirogata Vata, Dhamani Pratichaya, Dhamani Kathinya etc. There are Dhatu Dushti symptoms which match with hypertension. Vata being main carrier of other Dosha plays an important role in hypertension. Sparshan Indriya (tactile sensation) in skin has Vata in excess. Abhyangam is best for skin or indirectly saying best to control Vata\(^1\). Hypertension is a silent killer. It is a risk factor for all clinical manifestations of atherosclerosis. It is an independent predisposing factor for heart failure, coronary artery disease, stroke, renal disease and peripheral arterial disease.

The National Center for Health Statistic Surveys (NCHS) reported hypertension increased from 53% over 1960-1962 to 89% over 1988-1991. The percentage of patients taking hypertension treatment increased from 35% to 79% during this period\(^2\).

A 2005 NHANES report in the United States found that in the population aged 20 years or older, an estimated 41.9 million men and 27.8 million women had prehypertension (SBP, 120-139 mm Hg; DBP, 80-99 mm Hg), 12.8 million men and 12.2 million women had stage 1 hypertension (SBP, 140-159 mm Hg; DBP, 90-99 mm Hg), and 4.1 million men and 6.9 million women had stage 2 hypertension (SBP ≥160 mm Hg; DBP ≥100 mm Hg)\(^2\).

Genetic causes: The adrenergic receptor (ADRB1) and angiotensinogen genes are found responsible for hypertension\(^3\). Mutation almost always results in the development of hypertension\(^4\).

Etiology: When excess of Vyaayaama (Exercises), Tikshana Aahar (Spicy-salty diets), Virechan (Purgation) and Basti (Rectal route medicines) is done. Chinta (Tension), Bhaya (Fear), Trasa (Terror), Gadaticheara (Due to non-cure of other ailments), Chardi (Excessive vomiting), Aamdosha (Excessive production of toxic by-products), Sandharana (to stop natural urges), Karshan (poor diet and over excursion), Abhigatha (injury on heart or body parts) can lead to Hridya or Heart diseases\(^5\).

Different factors which can be compared in Ayurveda causing hypertension:

Vata: Hritshoonya (Emptiness in heart), Dravta (Sinking feel/Palpitation), Sosha
(dryness) and Bheda (stabbing pain in heart), Stambha (rigidity) and Samoha (loss of consciousness)\(^6\).

**Pita:** Tamoduyan (Blackout in front of eyes), Daha (burning sensation in body especially in heart), Moha (faintness), Santrass (fearsome), Jvara (fever) and Pitabhava (body appeals yellow)\(^7\).

**Kapha:** Stabhdha (Tightness), Guru (Heaviness), Stimita (rigidity in heart), Kapha Praseka (Salivation), Jvara (Fever), Kasa (cough), Tandra (Hypersomnia) are seen\(^8\).

**Pita and Rakta Dushti:** Raktapitta (Oozing of blood from body external orifices), Raktapradar (Menorrhagia), Akshiraga (Redness in eyes), Shirsruk (headache), Krodhaprachurta (increase in anger), Bhudhi Samoha (Loss of consciousness), Sweda (perspiration), Tamas Atidarshanam (blackouts)\(^9\).

**Meda Dhatu Dushti:** Even on slight workout dyspnoea starts. Buttocks, breast and abdomen start hanging\(^10\).

**MATERIALS AND METHODS**

Literary work on Ayurveda and internet media. Measurement of blood pressure, twice a day of patient undergoing Abhyangam.

**Contents of Prapaundrikadi Tailam,** each 10 ml is prepared out of:\(^11\)

- **Tailam 10.000 ml (oil of Cocos nucifera Linn.)**\(^12\)
- **Dhatri 10.000 g (Emblica officinalis Gaertn.)**\(^13\)
- **Prapaundarika 0.125 g (Nelumbo nucifera Gaertn.)**\(^14\)
- **Madhuka 0.125 g (Mudhuca indica J. F. Gmel.)**\(^15\)
- **Pippali 0.125 g (Piper longum Linn.)**\(^16\)
- **Chandana 0.125 g (Santalum album Linn.)**\(^17\)
- **Ulpala 0.125 g (Nymhaea nouchali. f.)**\(^18\)

**Review of Literary work:**

Prapaundrikadi Tailam is used for Shiroroga (head ailments) and all types of Palitya\(^19\). It is advised to use it in the form of Nasya (nasal medicine) or Abhyangam\(^20\).
<table>
<thead>
<tr>
<th>Name of Drug</th>
<th>Guna* (quality)</th>
<th>Rasa (Taste sensed by tongue)</th>
<th>Vipaka (Taste after metabolism)**</th>
<th>Virya (Heat released or absorbed after metabolism)***</th>
<th>Karmukta**** (functions)</th>
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<tbody>
<tr>
<td>Narikel Tailam</td>
<td>Guru, Snigdha</td>
<td>Madhura</td>
<td>Madhura</td>
<td>Shita</td>
<td>Vata-Pita Shamak</td>
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<td>Dhatri</td>
<td>Guru, Ruksha, Pancharas, Amlapradhan</td>
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<td>Prapaundrika</td>
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<td>Pippali</td>
<td>Laghu, Snigdh, Tikshna</td>
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* Laghu (Light), Ruksha (Rough), Snigdha (Greasy), Guru (Heavy), Pichila (Slurry) and Tikshna (Sharp)
** Madhur (Sweet), Amla (Sour), Katu (Pungent), Tikta (Bitter) and Kashaya (Astringent)
*** Ushna (Hot), Shita (Cold) and Anushnashita (in between hot and cold)
**** Vata/ Pita/ Kapha Shamak (Pacifier) and Vata/ Pita/ Kapha Hara or Rechaka (remover)

**Narikel Tailam:** Raktapitashamak (Pacifier of Pita and Rakta), Mutrakrichrtta (Oliguria/less and dysuria) 15.

**Dhatri:** Medhya (Brain Tonic), Nadibalya (Nerve tonic), Hridya (Heart tonic), Raktapitashamak (Pacifier of Pita and Rakta), Yakritutejak (Liver Tonic) and Mutrakrichrtta (Oliguria/less and dysuria) 13.

**Prapaundrika:** Medhya (Brain Tonic), Rakta and Mutrakrichrtta (Oliguria/less and dysuria) 15.

**Pippali:** Medhya (Brain Tonic), Yakritutejak (Liver Tonic) and Mutravikaranashak (Treats urine diseases) 16.

**Chandana:** It is Medhya (Brain tonic), Hridya (Heart tonic), Rakta and Mutrakrichrtta (Oliguria/less and dysuria) 13.

**Ulpala:** Medhya (Brain Tonic), Rakta and Mutrakrichrtta (Oliguria/less and dysuria) 14.

**CASE STUDY**
A male patient aged 35 years was taken for the case study. He was suffering from hypertension due to stress for about 5 years. Before starting treatment his blood pressure was recorded to be 180/120 mm of Hg and heart rate 104 beats/minute. He was then advised treatment of Abhyangam. During evening time five minutes of Abhyangam with Prapaundrikadi Tailam was given to each part of body in supine position taking about 45-60 minutes for whole body.

RESULTS AND DISCUSSION
From the first day only patient’s sleep became sound. Later on with each passing day heart rate started to control. On thirtieth day of his treatment heart rate was 78 beats/minute. On measuring blood pressure after completion of full treatment it was 124/90 mm of Hg. It was observed that during the course of treatment first heart rate started to control followed by blood pressure. This Prapaundrikadi Tailam used in Abhyangam works in controlling blood pressure.

Nervous system role: Sympathetic nervous system tends to raise blood pressure and the parasympathetic nervous system lowers it. The mechanisms of increased sympathetic nervous system activity in hypertension involve alterations in baroreflex and chemoreflex pathways at both peripheral and central levels. Exposure to stress increases sympathetic outflow, and repeated stress-induced vasoconstriction may result in vascular hypertrophy, leading to progressive increases in peripheral resistance and blood pressure. Angiotensin II causes constriction of all blood vessels and acts on adrenal glands to release Aldosterone. It increases re-absorption of salt and water leading to raised blood volume and raised blood pressure. Recent studies claim that obesity is a risk factor for hypertension because of activation of the renin-angiotensin system (RAS) in adipose tissue. The endothelium of blood vessels produces an extensive range of substances that influence blood flow and, in turn, is affected by changes in the blood and the pressure of blood flow. For example, local nitric oxide and endothelin, which are secreted by the endothelium, are the major regulators of vascular tone and blood pressure.

Action of Abhyangam: Abhayngam reduces old age, lethargyness and Vata Roga. Skin is site of Vata, so it cures Vata by direct action. Dalhana says during Abhyangam oil stays in hair follicles for three hundred Matra, four hundred Matra in Skin, five
hundred Matra in Rakta, six hundred Matra in Mansa, seven hundred Matra in Meda, eight hundred Matra in Asthi (bones) and nine hundred Matra in Majja (bone marrow) curing their Vata-Pita-Kapha Dosha\textsuperscript{28}. It decreases cortisol level which increases blood pressure by increasing the sensitivity of the vasculature to epinephrine and norepinephrine; in the absence of cortisol, widespread vasodilation occurs. Massage improves blood circulation, bringing with it what the muscle needs-oxygen and other forms of nourishment. The muscle then relaxes, and pain decreases. Massage relieves mental stress and anxiety\textsuperscript{29}. Abhyangam also increases dopamine which decreases blood pressure\textsuperscript{30}. Dopamine and angiotensin II serve counter regulatory functions in the kidney\textsuperscript{31}.

**Action on Dosha and Dhatu:** Oil can reach upto the level of Majja through Abhyangam. After entering inside body, it works on different Dosha and Dhatu. Vata along with Pita and Kapha Dosha are involved in hypertension. Ingredients of this oil works as; being Raktapitashamak means they have ability to correct vitiation of Rakta and Pita. Medhya and Nadibalya correct improper functioning of hormones and neurotransmitters at brain and other levels of body, Yakritutejak function to remove any anomaly in conversion of angiotensinogen secreted from the liver into the peptide angiotensin I, it works on Mutrakrichrta which in turn improves secretion of dopamine and controlling hypertension, Hridya property helps in proper functioning of heart not leading to anomalies in pumping or beating action leading to hypertension. Balya property helps body in fighting all odds which leads to hypertension due to release of neurotransmitters. As it can pacify Kapha and Vata also due to action of Abhyangam\textsuperscript{32}. So, hypertension due disturbance of Vata-Pita-Kapha will be rectified.

**CONCLUSION**

Abhyangam of Prapaundrikadi Tailam helps to correct hypertension. It also works on vitiated Dosha through physiological actions of its contents. This study can be further done on larger scale to collect more data for proving its authenticity and efficacy.
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