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Clinicopathological study on Nadi-Pariksha in Raktagat Vata w.s.r. to Hypertension: A Literary Review

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ABSTRACT

Ayurveda gives emphasis on diagnosis of disease before treatment. Examination plays a significant role in diagnosis of the diseases. In Ayurvedic texts there are different type of Rog-Rogi Pariksha i.e., Trividha Pariksha, Saptvidha Pariksha, Ashtavidha Pariksha, Dashavidha Pariksha etc. concept of Nadi Pariksha is found under the Ashatavidha Pariksha described by Yogratnakar, under heading of Rog Pariksha. The name "global capital of hypertension" refers to India. Due to its frequency and associated increased risk of cardiovascular diseases, hypertension, a chronic illness, is a significant public health challenge. Although essential hypertension is not specifically mentioned in Ayurvedic scriptures, sickness can be explained using these concepts. Raktadushti, which involves the Tridosha and has a strong Vata and Pitta component, is the cause of hypertension. We can determine Nadi in context of Prakruti, Vikruti, status of Doshas, Dhatus, Manas and Suskma Sharira.

Key words: Hypertension, Raktagat Vata, Ayurveda, Doshas, Nadi Pariksha.

INTRODUCTION

The 21st century is characterized by elevated levels of stress and anxiety, contributing to a decline in overall health prioritization. This modern lifestyle has fostered a surge in medical and mental health disorders, with hypertension emerging as a particularly critical concern. As a chronic condition with a strong association with cardiovascular diseases, hypertension poses a significant public health challenge. While classical Ayurvedic texts do not explicitly address

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hypertension, its symptomatology aligns with the Vata-related disorder, Raktgata Vata.

Hypertension, a silent killer, is a global health concern with increasing prevalence. Conventional medicine offers various therapeutic approaches, but the quest for effective management and prevention persists. Ayurveda, an ancient Indian system of medicine, offers a holistic perspective on health and disease.

Nadi Pariksha, a cornerstone of Ayurvedic diagnosis, involves assessing the patient's pulse to understand physiological state. The traditional texts the Sharangdhar Samhita, Yoga Ratnakara, Basavarajeevam and Bhavprakasha have discussed the details of Nadi Pariksha in succinct set of Shlokas. As per Ayurveda balanced Tridoshas represent the sound health and vitiated *Doshas* lead to diseases. According to Yoga Ratnakara all the diseases can be diagnosed from Nadi and it was compared with strings of Veena playing all the Ragas which signifies the importance of Nadi Pariksha. Dosha predominance is described in detail in the texts and is felt from specific locations on the radial artery. Accordingly, Vata Dosha is felt at the root of the thumb and is felt with the index finger; Pitta

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Dosha is felt next, and is felt with the middle finger; Kapha Dosha is felt with the ring finger.

In this modern era there are several references available for the disease hypertension with worldwide acceptance but in Ayurveda experts have suggested different names to demonstrate the phenomenon like पितावृत वात, स्कावृत वात, सिरागत वात व्यानवृष्धि, रक्तचाप, रक्तवृध्धि, धमनिप्रतिचय.^[1]

विकारनामाक्शलो न जिह्रीयात् कदाचन ।

न हि सर्वविकाराणां नामतोऽस्ति ध्रुवा स्थितिः || (Charaka Samhita, Sutrasthana 18/44)

According to Acharya Charaka, sometimes it is neither possible nor it is necessary to identify a disease by a name. An Ayurvedic physician should attempt to construct the *Samprapti* of a given clinical condition based on the sign's symptoms and investigative findings in each case and should plan the management accordingly.

Raktagat Vata is an Ayurvedic concept describing an imbalance of *Vata dosha* aggravated by blood impurities. This condition is often correlated with circulatory disorders, including hypertension. While modern medicine has explored the pathophysiology of hypertension extensively, the Ayurvedic perspective, particularly the role of *Nadi Pariksha* in understanding and managing this condition, remains under investigated.

This literary review aims to systematically evaluate existing research on the correlation between *Nadi Pariksha* findings in *Raktagat Vata* patients and the development of hypertension. By exploring the available evidence, we seek to understand the potential of *Nadi Pariksha* as a diagnostic and prognostic tool for hypertension. This review endeavours to bridge the gap between Ayurvedic and modern medical knowledge, contributing to a comprehensive approach for the management of hypertension.

AIM AND OBJECTIVES

1. To assess *Nadi* in *Rakatagata Vata* (both primary and secondary) patient irrespective of Religion, Age and Sex. 2. To study on clinical incidence of Aetiology, types, signs and symptoms of *Rakatagata Vata* in relation to hypertension in current medical practice.

MATERIALS AND METHODS

A comprehensive literature review was conducted encompassing Ayurvedic classics, scholarly journals, online databases, and contemporary research articles. Relevant references from both Ayurvedic and modern medical texts, as well as previous studies on the subject, were meticulously compiled.

LITERARY REVIEW

Nadi Pariksha Ayurvedic review

Nadi Pariksha, the art of pulse diagnosis, is a fundamental diagnostic tool in Ayurveda. It involves palpating the radial artery with the three fingers, assessing various parameters to understand the patient's physiological state. This review aims to explore the historical perspective, theoretical underpinnings, and contemporary research on *Nadi Pariksha*.

The origins of *Nadi Pariksha* can be traced back to ancient India, with detailed descriptions found in classical Ayurvedic texts like Sharangdhar Samhita, Yoga Ratnakara, Basavarajeevam and Bhavprakasha. These texts emphasize the importance of *Nadi Pariksha* in diagnosing diseases, determining prognosis, and guiding treatment.

Ayurveda posits that the body is composed of three fundamental doshas - *Vata*, *Pitta*, and *Kapha*. *Nadi Pariksha* is believed to reflect the balance or imbalance of these *Doshas*. The characteristics of the pulse, such as its strength, rhythm, depth, and temperature, are correlated with the predominant dosha and the nature of the disease.

Methodology of Nadi Pariksha

Synonym of Nadi

Nadi, Dhamani, Dharani, Dhara, Tantuki, Snayu, Jeevangyana, Hansi.^[2]

Tridoshas and Nadi

Three fingers placed in position over *Nadi* indicate the condition of the *Tridosha* and their movement like

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Manda, Madhyama and Tikshana. The index finger denotes Vata, the middle finger denotes Pitta and the ring finger denotes Kapha.^[3] Nadi Pariksha deals knowledge about involvement of Doshas and prognosis of disease. The parameters assessed include: Gati, Vega, Sthira, Dosha Pradhanata. The three main division made for the movement of the pulse, which resembles with the movements of various animals or birds, make the study easier and understandable.

Site of Nadi Pariksha

- The physician should conduct the pulse examination on the patient's right hand using their own right hand.
- The pulse felt at the wrist region indicates the patient's life status. The physician should be able to diagnose diseases and assess the patient's health by observing the pulse's nature.
- For male patients, use the right hand for the pulse examination, and for female patients, use the left hand, as the pulse is best felt in these respective hands.^[4]

Procedure of Nadi Pariksha (Pulse Examination)

- 1. The optimal time for *Nadi Pariksha* is in the early morning, for one *prahara* (approximately three hours).
- The physician should be seated comfortably and in a healthy, composed state of mind, while the patient should also be calm and relaxed.^[5]
- 3. Both the physician and the patient should sit in a comfortable place, facing each other.
- 4. The physician should gently hold the patient's elbow with their left hand and feel the pulse with their right index, middle, and ring fingers, placed close together near the wrist.
- 5. For males, the pulse is best felt in the right hand, while for females, it is best felt in the left hand.
- The physician should examine the pulse three times using the pressing and releasing technique, diagnosing diseases using their intellectual abilities.

- 7. The physician should identify *Vata*, *Pitta*, and *Kapha* pulsations with the index, middle, and ring fingers respectively, noting their characteristics such as feeble, moderate, or fast, and recognize the nature of various *Doshic* pulses.
- The pulse examination reveals the involvement of Vata, Pitta, and Kapha, the combination of two or three doshas, and whether the condition is curable or incurable.

While *Nadi Pariksha* has been a cornerstone of Ayurvedic practice, scientific validation is emerging. Recent studies have explored the correlation between *Nadi* parameters and physiological parameters like heart rate, blood pressure, and autonomic nervous system activity. Some studies have also investigated the potential of *Nadi Pariksha* in early detection of diseases.

Nadi Pariksha is a valuable diagnostic tool with a deeprooted history in Ayurveda. While modern research is still in its early stages, the potential of *Nadi Pariksha* in understanding physiological processes and aiding in disease diagnosis is promising. Further studies are needed to establish its reliability, validity, and integration into mainstream healthcare.

Raktagata Vata Ayurvedic review

The disease hypertension is abnormality of *Rakta Dhatu* popularly known as *Shonita Dushti* because *Lakshanas* are similar to that of hypertension are - *Shiroruk, Klama, Anidra, Bhrama, Buddhi Sammoha, Kampa* which akin to the manifestation of hypertension. *Mada, Murcha, Sanyasa* equally true in relation to malignant hypertension.^[6]

The disease *Raktagata Vata* is one of the *Nanatmaja Vata Vyadhi*^[7] (specific diseases caused by individual *Doshas*) i.e., *Raktagata Vata* (HTN) disease occurs due to vitiation of *Vata Dosha* specially. The *Nidana* (Causative factor) described by *Charak* in the context of *Vata Vyadhi* vitiates only the *Vata Dosha* and not, the other factors involved in disease like *Dushya*, *Srotas*(channels) etc.^[8] In *Raktagata Vata*, the vitiated *Vata* interacts with *Rakta Dhatu* and *Raktavaha Srotas* (circulatory system), leading to the development of the

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disease. Notably, the abnormal state of *Rakta* and *Raktavaha Srotas* is a consequence of the imbalanced *Vata*, rather than being caused by independent factors.^[9]

According to Ayurveda the *Nidana* (causative factor) of *Raktagata Vata* (HTN) as described in the context of *Vatavyadhi* (disease caused by *Vata*) by Acharya Charak, are^[10]

Aharaja Nidana (Dietary Factors)

- Ruksha and Sheeta Aahara: Dry and cold foods are termed as Ruksha and Sheeta, respectively. These can aggravate Vata Dosha.
- Alpa and Laghu Aahara: Insufficient or light food is described as Alpa and Laghu. These can weaken the body (Dhatu Kshaya) and subsequently lead to Vata imbalance.
- Ama: This term itself signifies undigested food or toxic residue. It is a crucial factor in vitiating all three doshas, including Vata. Ama obstructs channels (Srotas) and interferes with normal physiological processes.

Viharaj Nidan (life style disorder)

- Vyayama: Excessive physical exertion, improper exercise
- Atiprajagaran: Insomnia, excessive wakefulness
- Divasvapa: Daytime sleep
- Langhana: Fasting, improper diet
- Plavana: Swimming
- Vegasandharaņa: Suppression of natural urges
- Abhighata: Injury, trauma
- Asvasana, Uştrasana, Gaņasana, Shighra Yana: Riding on horse, camel, elephant, or fast vehicles
- Vyavaya: Excessive sexual activity
- Vişama Upachara: Improper therapeutic measures
- Doşa & Asrik Srava: Excessive discharge of doshas and blood

Mansika Nidana (Psychological Factors)

- Chinta: Excessive worry
- Shoka: Grief
- Krodha: Anger
- Bhaya: Fear
- Dhatu Kşaya: Depletion of bodily tissue.

Samprapti (Pathogenesis)

In Ayurveda pathology of any disease is explained in terms of *Dosha*, *Dushya*, *Srotas* (channels), *Mala* (waste) in terms of their, *Kshaya* (decrease) and *Vriddhi* (increase) and *Prakopa* (aggravation). *Avarana* (covering), *Ama* (undigested food) and other factors are also involved.^[10]

Roopa

Raktgata Vata (Hypertension), a complex disorder characterized by elevated blood pressure, can be understood through the lens of Ayurvedic principles. This condition arises from an imbalance of the three doshas (*Vata*, *Pitta*, and *Kapha*) and their subsequent impact on dushya and other factors.

- Vata Dosha: Predominantly responsible for the manifestation of hypertension, Vata vitiation leads to symptoms such as pain, headache, dizziness, palpitations, insomnia, stiffness, numbness, and tinnitus. Prana Vayu governs vital functions, while Vyana Vayu is responsible for circulation. Their imbalance contributes to circulatory disturbances.
- Pitta Dosha: While secondary, Pitta aggravation exacerbates the condition. Symptoms include burning sensation, discoloration, excessive sweating, and insomnia. Pitta's role in metabolism and transformation is crucial, and its imbalance can lead to oxidative stress and inflammation.
- Kapha Dosha: Essential for maintaining cardiovascular health, Kapha vitiation can contribute to hypertension by affecting the smooth functioning of the heart and blood vessels.
- Ama: The accumulation of toxins due to impaired digestion (Agnimandya) further aggravates the

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condition. *Ama* obstructs channels, leading to edema, fatigue, and reduced appetite.

An imbalance in *Samana Vata* and *Pachaka Pitta* results in poor digestion (*Agnimandya*), leading to the formation of *Ama*. This, in turn, hampers the transformation of food into essential tissues, causing the accumulation of excess *Meda* (fat) and its deposition in blood vessels. *Sadhaka Pitta*, located in the heart, governs mental functions. Its imbalance can affect the mind-body connection, influencing blood pressure regulation. Based on the observed symptoms and the understanding of *Doshic* functions, hypertension appears to be a *Vata*-predominant disorder with significant contributions from *Pitta* and *Kapha* imbalances.

Raktagat Vata is a complex Ayurvedic concept with potential implications for understanding and managing cardiovascular disorders. While modern medicine has made significant advancements, the Ayurvedic perspective offers complementary insights into the pathophysiology and management of these conditions. Further research is essential to bridge the gap between Ayurveda and modern medicine and to explore the potential benefits of integrating Ayurvedic approaches into mainstream healthcare.

Raktagata Vata modern review

Hypertension: Hypertension, often termed the "silent killer," is a chronic medical condition characterized by persistently elevated blood pressure. Blood pressure is the force exerted by the blood against the walls of your arteries as it circulates. When it's consistently too high, it puts extra strain on your heart and blood vessels.

Causes of Hypertension

While the exact cause is often unknown in many cases (primary hypertension), several factors contribute to its development:

- Lifestyle factors: These include obesity, lack of physical activity, excessive salt intake, smoking, and excessive alcohol consumption.
- Medical conditions: chronic kidney disease, sleep apnea, and thyroid disorders can contribute to hypertension.

 Genetics: A family history of hypertension increases the risk.

Complications of Hypertension

Uncontrolled hypertension can lead to severe health problems, including:

- Heart attack
- Stroke
- Heart failure
- Kidney damage
- Vision loss
- Aneurysm

Pulse Rate

The Pulse rate is a measurement of the heart rate, or the number of times the heart beats per minute. Heart Rate is 72 beats/minute. It ranges between 60 & 80 bpm.

Tachycardia - Increase in the heart rate above 100 bpm is known as tachycardia.

Psychological condition

Psychological conditions Tachycardia occurs are -Childhood, Exercise, Pregnancy, Emotional conditions such as high anxiety, etc.

Pathological conditions

Pathological conditions when Tachycardia occurs are -Fever, Anaemia, Hypoxia, Hyperthyroidism, Hypersecretion of catecholamines, Cardiomyopathy, Valvular disease.

Bradycardia - Decrease in the Heart rate below 60 bpm is known as bradycardia.

Psychological conditions

Psychological condition when bradycardia occurs are-Bradycardia occurs in sleep, Athletes having low heart rate, etc.

Pathological conditions

Pathological conditions when bradycardia occurs are-Hypothermia, Hypothyroidism, Heart attack, Congenital heart disease, Degenerative process of

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aging, Obstructive jaundice, Increased intracranial pressure and Drugs which include bradycardia are- B-blockers, Ca-Channel blockers, Digitalis and other antiarrhythmic drugs, etc.

Pulse rate and **blood pressure** are intricately linked through their impact on cardiac output and peripheral vascular resistance. The relationship between pulse rate and blood pressure is complex and influenced by various physiological factors. While an increased heart rate generally leads to an increase in systolic blood pressure, the overall effect on blood pressure depends on the interplay of cardiac output, peripheral vascular resistance, and another factors.^[11]

DISCUSSION AND CONCLUSION

While modern medicine offers a comprehensive understanding of hypertension, Ayurveda, with its emphasis on holistic health, provides a unique perspective through *Nadi Pariksha*.

Correlation Between Nadi Pariksha and Hypertension

- Vata Dominance: Ayurvedic texts correlate hypertension with an imbalance of Vata dosha, particularly Raktagat Vata. Nadi Pariksha can identify this imbalance through specific pulse characteristics, such as a rapid, irregular, and feeble pulse.
- Pitta Involvement: Hypertension is associated with an aggravated Pitta Dosha as well. This can manifest in a sharp, forceful, and hot pulse.
- Vital Organ Assessment: Nadi Pariksha can assess the condition of vital organs like the heart, kidneys, and brain, which are often affected by hypertension.
- Early Detection: Some practitioners believe that Nadi Pariksha can detect early signs of hypertension before it manifests in clinical symptoms.

While modern medicine offers effective management strategies for hypertension, *Nadi Pariksha* provides a complementary perspective. By understanding the pulse characteristics associated with hypertension, practitioners can identify potential risk factors and develop personalized treatment plans. A collaborative approach that combines the strengths of both systems can lead to improved patient outcomes.

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