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REVIEW ON HYPERTENSION – AN AYURVEDIC PERSPECTIVE

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ABSTRACT

Hypertension, a pervasive modern affliction, affects millions globally. Ayurveda, India's ancient holistic medical system, offers unique insights into its management. This study explores hypertension through the Ayurvedic lens, examining its similarities with Raktachapa (Vascular disorders). Ayurvedic principles attribute hypertension to Dosha imbalances, particularly Pitta and Kapha, and lifestyle factors like stress, diet, and sedentary habits. Ayurvedic management strategies include Diet modification (Avoiding salty, sour, and fermented foods), Herbal remedies (Arjuna, Ashwagandha, and Guggulu), Panchakarma detoxification, Yoga and stress management, Lifestyle adjustments (Dinacharya and ritucharya) This research highlights Ayurveda's potential in addressing hypertension's root causes, promoting holistic well-being, and preventing complications. By integrating Ayurvedic principles with modern medicine, healthcare. practitioners can develop comprehensive treatment plans for hypertension management. Over the past three decades, rapid modernization has led to increasingly stressful lifestyles, contributing to the alarming rise of hypertension. According to projections, 29.2% of the global adult population will suffer from hypertension by 2025, with India being labeled the "global capital of hypertension." Worryingly, lifestyle disorders now affect younger populations, shifting the risk demographic from 40+ to 30+ or even younger. Hypertension results from factors like stress, obesity, genetics, excessive salt consumption, and aging. As a "silent killer," hypertension often lacks symptoms until it damages vital organs like the heart, brain, or kidneys. Despite modern medicine's potent antihypertensive drugs, their side effects remain a concern. Ayurveda prioritizes maintaining good health through a balanced lifestyle. Although Ayurvedic texts don't explicitly describe hypertension, physicians can understand its nature through Dosha, Dushya, and Samprapti analysis. This research paper aims to interpret hypertension from an Ayurvedic perspective, facilitating effective treatment and prevention strategies.

KEYWORD: Hypertension, Lifestyle Disorders, Raktachapa, Ayurveda, Silent Killer.

INTRODUCTION

Hypertension, a chronic and often asymptomatic condition, has become a major public health concern worldwide, with India being labeled the "global capital of hypertension." Ayurveda, with its holistic approach, provides a unique framework for understanding and managing hypertension. According to Ayurvedic principles, hypertension results from an imbalance of Pitta and Kapha Doshas, exacerbated by lifestyle factors such as stress, unhealthy diet, and physical inactivity. Furthermore, Dhatu Dushti (Tissue impairment) and Strotas dysfunction (Channel obstruction) contribute to the development of hypertension. Raktachapa, a vascular disorder described in Ayurvedic texts, bears striking similarities with hypertension, characterized by blood pressure fluctuations, vascular damage, and cardiovascular complications. By exploring hypertension through the Ayurvedic lens, this study aims to develop effective management strategies, addressing the root causes and promoting overall well-being.

According to the World Health Organization (WHO), India is among the nations expected to experience a significant rise in lifestyle disorders. Hypertension, a silent killer, results from factors like stress, obesity, genetics, excessive salt consumption, and aging. This chronic condition often remains asymptomatic until damaging vital organs like heart, brain and kidney.[1] Globally, hypertension poses a significant public health challenge, contributing to morbidity and mortality.[2] The WHO reported 26.4% of adults suffered from hypertension in 2000, with projections indicating 29.2% by 2025.[3] Hypertension strains the heart and arteries, potentially leading to cardiovascular dysfunction,

congestive heart failure, myocardial infarction, pulmonary embolism, cerebral aneurysm, and kidney failure.[4] Despite available antihypertensive medications, their side effects remain a concern, particularly for the elderly. Ideally, treatment should control blood pressure, prevent target organ damage, and preserve cardiac and renal functions.[5] Ayurveda, lacking a direct description of hypertension, emphasizes understanding the disease through Dosha, Dushya, and Samprapti analysis.

To effectively address hypertension, it's essential to study multiple factors, including Dosha Vruddhi (Imbalanced humors), Dhatu Dushti (Tissue impairment), Strotas involved (Channel dysfunction). By examining these aspects, healthcare practitioners can better comprehend hypertension's causes, prevention, and treatment from an Ayurvedic perspective.[6]

AIMS AND OBJECTIVES

To find out the factors involved in hypertension as per Ayurvedic perspective and to explain hypertension in terms of Ayurveda. This research paper is a sincere effort to understand hypertension in terms of Ayurveda, which will be beneficial for treatment as well as preventive purpose.

MATERIALS AND METHODS

To investigate signs and symptoms resembling hypertension from an Ayurvedic standpoint, this study analyzed classical Ayurvedic texts, modern literature, research updates, and scientific information.

Defination and Diagnosis of hypertension

The tension exerted on the wall of arteries by the strength of the contraction of the heart is called “Blood Pressure”.[7] In adults’ hypertension is a condition in which the blood pressure is higher than 140 mm Hg systolic or 90 mm Hg diastolic on three separate reading recorded several weeks apaer.[8]

Classification of hypertension

Hypertension can be categorized into two types

1. **Primary (Essential) Hypertension (97-98%):** This type lacks a clear underlying cause, resulting from complex interactions between genetic and environmental factors.

2. **Secondary Hypertension (2-3%):** This type is attributed to specific underlying mechanisms, often involving renal or endocrine system dysfunction.

Factors influencing blood pressure

Blood pressure is affected by Vascular elasticity, Blood volume, Cardiac output, Peripheral resistance (dependent on blood viscosity, vessel diameter, and length).[9]

Additional factors contributing to hypertension include Smoking, Obesity, Sedentary lifestyle, Excessive salt intake, Alcohol consumption, Stress, Family history of hypertension.[10]

Ayurvedic perspective

Ayurveda recognizes the interconnection between body and mind. Treating psychological factors is crucial in managing stress-related hypertension. According to Ayurveda, Vata Dosha regulates and stimulates Mana (mind). Understanding this principle is essential in treating hypertension. Description of Hridaya and Rasa Vikshepana (circulation) by Vyana Vayu provides valuable insights into the disease.[11] Hypertension can be understood through Dosha, Dushya, and Strotasa analysis, indicating vitiated Vata Dosha as the primary cause, complemented by Pitta and Kapha. Previous research suggests hypertension is a 'Vata Pradhan Tridoshaja Vyadhi,' significantly influenced by Mana, making it a Sharir and Manas Roga (Ubhayashrita Vyadhi).[12]

Ayurvedic scholars have proposed various terms to describe hypertension, including Rakta Gata Vata, Shiragata Vata, Avritta Vata, Dhamani Prapurnata, Rakta Vriddhi, Rakta Vikshepa, Rakta Chapa, Rakta Sampida, Vyana Bala, Dhamanipratichaya, Rasa Bhara, Rudhira Mada and Rakta Vata.

Dosha involved in hypertension

Prana vayu: Similar to the nervous system, Prana Vayu regulates blood pressure through Vyana Vayu.[13]

Vyana vayu: Responsible for cardiac contractions and blood circulation, influencing blood pressure regulation.[14]

Samana vayu: Samana Vayu facilitates the transportation of Rasa into the heart and its circulation throughout the body after digestion, as described by Sharangadhara.[15]

Apana vayu: Vitiation of Apana Vayu disrupts Purisha and Mutra excretion, affecting homeostasis and potentially influencing blood pressure.[16]

Avalambaka kapha: Avalambaka Kapha maintains normal cardiac rhythm, contractility, and tone, ensuring the heart's continuous pumping capacity.[17]

Dushya: The circulatory system involves Aahar Rasa, Rasa Dhatu, and Rakta Dhatu. Rasavaha and Raktavaha Srotas are crucial for Rasa-Rakta Samvahana.

Rasa dhatu: Acharya Charaka identified factors contributing to Rasavaha Strotas Dushti, including excessive intake of heavy, cold, or unctuous food and constant worry.

Rakta dhatu: Raktavaha Strotas vitiation results from consuming irritant, unctuous, hot, or liquid foods and drinks, excessive sun exposure, and fire exposure.[18]

Agni: Agni Dushti occurs at two levels: Jatharagni Mandya and Dhatwagni Mandya. Factors causing

Jatharagni Mandya include excessive diet, intake of opposing foods, and eating before digesting previous food. Jatharagni Mandya affects other Agni, leading to Ama formation, Strotorodha, and Dosha vitiation, increasing peripheral resistance and potentially causing hypertension.[19]

Mana: Ayurveda recognizes Pradnyaparadha and Asatmendriyartha Samyoga as root causes for diseases, indicating psyche involvement. Manas Bhavas like worry, anger, and fear contribute to disease pathogenesis and response to treatment.[20]

Pathogenesis of hypertension (Samprapti)

The pathogenesis of hypertension is a complex process, with secondary hypertension mechanisms being well-understood, whereas essential hypertension remains less clear. Hypertension develops at both physical and psychic levels, either sequentially or simultaneously, influenced by Dosha-Dushya Sammurchhana. In this context, Agnidushti plays a pivotal role, leading to Ama formation and subsequent Dhatudushti, affecting Rasa and Rakta. This sequence triggers KhaVaigunya, an obstructive pathology in channels, resulting in Ama accumulation. Consequently, Strotorodha occurs, partially blocking normal Rasa-Rakta circulation and vitiating Vyana Vayu. The obstruction of Vyana Vayu forces blood flow through blood vessels, increasing resistance and ultimately elevating blood pressure. This intricate process highlights the interplay between physical and psychic factors in hypertension development.[21]

Treatment of hypertension (Chikitsa)

Hypertension treatment should be tailored according to the involved Dosha and Dushya. Manasa Bhavas, such as Chinta, Krodha, and Bhaya, significantly influence disease progression and treatment response.

Therapeutic approaches

1. **Panchakarma**

a. **Abhyanga (Massage):** Enhances elasticity, flexibility, and blood flow.

b. **Vaman and Virechan (Emesis and Purgative therapy):** Beneficial for patients with Uttam Bala and mild/moderate hypertension.

c. **Basti (Medicated enema):** Effective for Vata disorders.

2. **Dietetics:** Reduce sodium[22] intake and excessive water retention, Adopt a high potassium diet, Consume fruits, vegetables, whole grains, and low-fat dairy products, Limit refined sugar, processed food, caffeine, Acharya Charak has also considered Lavan[23] as a substant not be used in excessive quantity for longer duration and alcohol.[24]

3. **Yoga and Stress reduction:** Meditation, yoga, and relaxation techniques lower blood pressure,[25] Beneficial asanas: Shavasana, Sukhasana, Dhanurasana, Makarasana, and Vajrasana, Pranayama[26] practice helps control Prana.

4. **Additional Strategies:** Weight reduction**,** Regular aerobic exercises (brisk walking, jogging)**,** Discontinuing tobacco use**,** Limiting alcohol consumption.[27]

Hrudayotpatti (Cardiac development)

Acharya Sushruta's concept: Heart development from pure Rakta and Kapha.[28]

Effective treatment considerations: Drugs targeting Rakta and Kapha constituents and Lifestyle modifications.

DISCUSSION

Ayurveda views hypertension as a complex condition resulting from doshic imbalance and lifestyle factors. The primary dosha involved is Vata, with Pitta and Kapha playing secondary roles. Causes include stress, mental tension, poor diet, digestion, sedentary lifestyle, family history, and excessive salt consumption. Symptoms manifest as headaches, dizziness, fatigue, palpitations, and nosebleeds. Ayurvedic treatment focuses on restoring balance through Panchakarma (Detoxification and Rejuvenation), herbal remedies (Ashwagandha, Arjuna, Hawthorn), dietetics (low-sodium, high-potassium diet), yoga, and stress reduction (meditation, Pranayama, asanas). Lifestyle modifications, such as regular exercise and stress management, are also emphasized. Hypertension results from a combination of factors, including improper lifestyle and food habits, psychological stress, and genetic predisposition, which disrupt the balance of the three Doshas. This disruption triggers the pathogenesis of hypertension through mechanisms such as Anya Dosha Avarana and Anyonya Avarana. Fortunately, modern medical advancements enable early diagnosis, allowing for effective management and prevention of damage to vital organs. Hypertension can be understood as a psychosomatic hemodynamic condition characterized by the vitiation of Vata-pradhana Tridoshas, affecting Rasa-Rakta Dhatus and impacting both physical and mental well-being. The condition has its roots in Sarva Shareera and Manas, with long-term complications leading to structural changes in organs like the heart, blood vessels, and kidneys.

CONCLUSION

Ayurveda offers a comprehensive and natural approach to hypertension management. By understanding the underlying doshic imbalance and addressing lifestyle and dietary factors, individuals can effectively manage hypertension. Ayurvedic treatment provides a sustainable solution for maintaining cardiovascular health, emphasizing individualized treatment considering unique constitutional and lifestyle factors. Future research should focus on clinical trials to establish the efficacy of Ayurvedic treatment and integrate Ayurvedic principles into conventional healthcare. Educating the public on

Ayurvedic lifestyle modifications can also play a crucial role in preventing and managing hypertension. The prevalence of hypertension continues to rise despite numerous antihypertensive medications in modern medicine, prompting a growing interest in Ayurveda's holistic approach. Effective management of hypertension without adverse effects is crucial today. Ayurveda defines health as the equilibrium of Doshas, Dhatus, Malas, and Agni. When examining hypertension through an Ayurvedic lens, three key considerations emerge: Firstly, pathophysiological changes involving vitiated Doshas (Vata, Pitta, and Kapha), Dhatu, and Mala Dushti. Secondly, psychological disturbances at the Mana level (Manovaha Strotas Vikara). Lastly, structural complications arising from long-term hypertension affecting organs like the heart, blood vessels, and kidneys. Integrating Ayurvedic and modern medical perspectives reveals the practicality of Ayurveda's pathogenesis-based treatment approach. Ayurvedic management emphasizes avoidance of etiological factors (Pathya-Apathya) and adherence to Aahar (diet) and Vihar (lifestyle) guidelines to maintain homeostasis and prevent hypertension. Proper medication, combined with Aahar, Vihar, and Yoga, effectively controls blood pressure without adverse effects. The absence of hazardous effects in Ayurvedic management aligns with its growing global acceptance.

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REFERENCE

1. WHO report of Prevention and control for Cardio vascular diseases, 2001-2002, available fromhttp://www.sld.cu/./pdf/./internationalcardiovascular disease statistics, 22.
2. Moser M, Roccella EJ, The treatment of hypertension: a remarkable successstory, EJ Clin Hypertens (Greenwich), 2013; 15: 88-91.
3. Whelton P. K, Global burden of hyper-tension: an analysis of worldwide data, The Lancet, 2005; 365(9455): 217-223.
4. S.D. Pierdomenico etal. "Prognosticvalue of different indices of blood pressure variability in hypertensive pa-tients." American Journal of Hypertension, 2009; 22(8): 842–7.5.
5. Siddhart N. Shah. API Text Book of Medicine, 2003; 7: 457-459 and 430-432.
6. Charaka Samhita, Yadavaji Trikramji, Reprint edition, Chaukhamba SansritSansthana, Varanasi, 2009, Sutrasthana, 2009; 108; 18-46.
7. Tabers Cyclopedic Medical Dictionary, 2005; 20: 268-10.
8. Ibid, 9, 1039.11.
9. Siddhart N. Shah. API Text Book of Medicine, 2003; 7.
10. Charaka Samhita Vaidya Yadavaji Trikamaji Acharya, Chaukhmbasurbhara prakashana, 2000; 12.
11. Charaka Samhita', Vaidya Yadavaji Trikamaji Acharya, Chaukhmbasurbharati prakashana, 2000; 18: 49.
12. Ibid-13, 44-46.
13. Vriddha Vagbhata, Ashtanga Samgra-ha (Shashilekha commentary of Indu), edited by Shivaprasad Sharma, Chaukhamba Sanskrit series office, Varanasi, Sutrasthana, 2008, 20, 6: 15617.
14. Ibid 1618.
15. Sharangadhara, Sharangadhara Samhita, edited by Shailaja Shrivastava, Reprint edition, Chaukhamba Orientalia, Varanasi, Poorvakhanda, 2009; 6-8, 52.
16. Swami Sadashiva Tirtha, The Ayurveda Encyclopedia, edited by RC Uniyal, Ayurveda holistic center press, USA, 2005; 5: 360.
17. Ranjitray Desai, Ayurvediya Kriyasharira, Baidyanath Ayurveda Bhawan Ltd., Allahabad, 2003; 2: 741.
18. R. K. Sharma et. Al., Caraka Samhita, Chaukhamba Sanskrit Se-ries Office, Varanasi, Third edition, 1994; 2: 5, 12-14, 178-179.
19. R.K.Sharma et. Al., Caraka Samhita, Chaukhamba Sanskrit Series Office, Varanasi, Fourthedition, 1995; 1, 370: 20-17.
20. Dhananjay Patel et.al, Role of ManasBhavas in the etiopathogenesis of Uccharaktachapa (EHT) and its management with Medhya Rasayana and Shrodhara, MD thesis, GAU, Jamnagar, 2003.
21. Viadya Yadunandan Upadhayaya editor Ashtanghridyam Sootrsthana Chaukhamba Prakashan, Varanasi, 13-25, 8, 111.
22. L.J. Appel et al. "A clinical trial of the effects of dietary patterns on blood pressure." New England Journal of Medicine, 1997; 336(16): 1117–24.
23. Dr.Brahmanand Tripathi, Charak Samhita, Chaukhambha Surbharati Prakashan, Varanasi, Vimanasthana, 2009; 660: 1-15.
24. R.J. Padwal et al. "The CanadianHypertension Education Program recommendations for the management of hypertension: Part 2 – Therapy." The Canadian Journal of Cardiology, 2010; 26(5): 249–258.
25. M.V. Rainforth et al. "Stress Reduc-tion Programs in Patients with Elevated Blood Pressure: A Systematic Review and Meta-analysis." Current Hypertension, 2007; 9(6): 520–8.
26. (http://nopr.niscair.res.in/bitstream/123456789/8524/1/IJTK%204(4)%20367-372.pdf).
27. http://shodhganga.inflibnet.ac.in/bit-stream/10603/34853/8/08_literary%20review.pdf.
28. Susruta, Susrutasamhita, Vaidya Yadavaji Trikamaji Acharya, Chau-khamba Surabharathi Prakashan, Varanasi, Sharirsthana, 2008; 7: 4-3.
29. Principles of Anatomy and Physiology13th edition - G. Tortora, B. Derrick-son (Wiley,) BBS, 2012; 815.