

Possible Integrative Approaches to Treatment of Hypertension

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Received: 📅 2024 Oct 01

Accepted: 📅 2024 Nov 25

Published: 📅 2025 Jan 28

1. Introduction

High blood pressure is a prevalent medical condition that puts at a great risk one's cardiovascular health. According to the American College of Cardiology and AHA Guidelines for the diagnosis, treatment and management of hypertension in adults, hypertension is defined in four stages, including 120/080mm Hg and below, representing the average category. Despite this, there is increased emphasis on integrative approaches because they have been viewed as effective alternatives to conventional therapies like lifestyle changes or medication therapy. The article review explores different integrating techniques with information coming from the comprehensive case study and other relevant studies aimed at providing new directions for the treatment of high blood pressure as well.

1.1. Purpose of the Literature Review

The purpose of this literature review is to explore the diverse approaches of integrative medicine toward hypertension. The aim is to undertake a thorough check of available research literature incorporating an intensive case study, with emphasis being placed on contemporary tactics that surpass traditional approaches. The aim is, therefore, to build on the available data by integrating findings from notable sources, which will prove instrumental in educating healthcare practitioners, researchers, and people struggling with hypertension. Thus, the overall aim is to highlight possibilities of systematic blood pressure control as a whole by considering multidisciplinary and new approaches.

1.2. Literature Review

12.1. Pathophysiology of Hypertension

It is essential to understand the primary mechanism of the disease - pathophysiology, so appropriate treatment can be implemented. Hypertension occurs when there is a greater force exerted on artery walls resulting from high pressures within the heart and arterial resistances. Primary and secondary hypertension present with distinctive onsets. Secondary hypertension is related to pre-existing illnesses and comes on abruptly, whereas primary hypertension is gradual in onset. Harrison discuss the role of oxidative stress in hypertension [1]. The body produces ROS, which causes oxidative stress when in excess, beyond its antioxidant defense mechanisms. The imbalance results in vascular dysfunction and high blood pressure. Moreover, vascular injury is worsened by inflammation in hypertension. The Mosaic Theory understands that oxidative stress and

inflammation are essential processes involved in the intricate physiopathology of hypertension.

Touyz provide genotypic views of hypertension [2]. Although genetic factors may not be the sole causes for occurrence, they have been found to substantially pre-determine one's propensity towards hypertension. The mosaic theory allows for diversity in the genetic background that causes the onset and advancement of hypertension. In addition to being linked to secondary hypertension, disturbances in sodium homeostasis, a crucial aspect of blood pressure regulation, also lend credence to the multiple-factor etiology theory of high blood pressure. The latest studies showcased by Harrison demonstrate the microbiome's contribution to blood pressure [1]. Mosaic Theory states that the gut affects systemic inflammation, and atherosclerosis processes in the vasculature are recognized.

1.2.2. Risk Factors and Complications

An all-round perspective is essential to develop effective policies towards prevention and control. As discussed by Harrison hypertension is multifactorial, which is why these risk factors cannot act separately since they are always found together and contribute to the general pathophysiology of this problem [1]. Hypertension has many complicated causes, from age to genetics, lifestyles, and certain diseases. Harrison shed light on the complexity of the mystery surrounding hypertension as a multifarious disorder [1]. Authors emphasize the necessity to recognize that each single risk factor relating to hypertension is not isolated but exists as part of a web. The interdependence provides another dimension to the concept of high blood pressure, making it clear that control can only be achieved through a multiple-solution response.

According to Harrison an advancing age is one of the non-modifiable risk factors [1]. Physiological changes occur in the old age of the heart, including hardened arteries and reduced elasticity, among others. These age-related changes facilitate the progression of hypertension towards the development stage and its motion. Identifying age as a non-modifiable risk factor highlights the importance of tailored interventions for different age groups. The second non-modifiable risk factor relates to genetics, meaning if there is a family history of hypertension, then high blood pressure is more likely to occur in an individual as well. Specifically, Touyz highlight the genetic nature of hypertension and its

"familial" aspect [2]. Healthcare providers can identify many high risks from knowledge of the patient's family history and make an individualized plan to treat their hypertension.

Touyz provide a more extensive investigation of the genetic aspect of hypertension [2]. The review points out the connection with hypertension, especially concerning several genes involved in its origin. Hence, this reinforces the significance of individualized strategies in the treatment of hypertension. However, it is possible to create better solutions by designing interventions in accordance with different genetic types instead of following a one-size-fits-all approach. The integrative interventions for hypertension must consider the nonmodifiable risks associated with age and parental hypertension. It indicates that the multifaceted nature of hypertension implies that the one-size-fits-all approach might not be successful. However, drugs should be made according to age, genetic predisposition, and family history in each case. Headways in genetic testing and personalized medicine can be used by integrator care models for a refined approach to managing hypertension. By acknowledging the interaction among unchangeable elements in patients' hypertensiveness profiles, healthcare specialists may develop a wide patient-based strategy, which is aimed at including all remarkable traits in every specific hypertensive patient.

Integrative approaches provide a basis for changing way-of-life variables that are integral components that influence hypertension. For instance, the CDC (2023) highlights the implication of lifestyle on managing blood pressure [3]. Modifiable risk factors implicate those associated with weight (need to work out), tobacco utilization, intemperate salt admissions, and weight (Centers for Disease Control and Prevention CDC (2023) [3]. The knowledge guides integrator processes that usually start with way-of-life changes as a basic aspect of hypertension management. Comprehensive, patient-centered care plans should include dietary changes, stopping smoking, and engaging in additional physical activity.

Moreover, the CDC (2021) notes that high blood pressure can also result from medical illnesses other than lifestyle choices, such as thyroid problems, obstructive breathing while sleeping, and chronic renal disease [4]. In their review of secondary hypertension, Hedge and Aeddula (2019) focus on the necessity of detecting and treating comorbidities, which are critical to successful hypertension control [5]. Therefore, integrative approaches should include a detailed medical history and a review of the patient's medical conditions. Through early diagnosis and treatment of such underlying diseases, clinicians can control blood pressure and avoid related health problems in patients with hypertension. It is consistent with the philosophy of integrative care aimed at understanding the overall health environment of patients.

Some of the consequences that are associated with untreated high blood pressure stress the importance of having practical approaches geared towards management. The authors stress the downstream effect of high blood pressure that ultimately

affects other organs in the body and can eventually become fatal. The complications are encompassed by heart attack and stroke, aneurysms, renal damage, loss of vision, and metabolic and cognitive disorders. While the integrative approach appreciates how urgent it is to fight against these complications, it concentrates on eradicating the origin of hypertension. Integrative care, however, uses preventive measures by controlling BP and adopts management strategies that aim at a complete reduction in risks as well as the severity of the complications associated with hypertension. Such an approach conforms with the holistic concept of the preventive and curative measures adopted in integrative medicine that seek optimum clinical results for the patient. Combining these elements into a patient-oriented strategy is possible. Through this approach, healthcare professionals will make progress toward comprehensive hypertension management. A new perspective is to integrate preventative measures and customized interventions based on an elaborate perception of hypertension's intricacies as a means of achieving the best patient outcomes.

1.2.3. Conventional Treatment and Lifestyle Modifications

Hypertension management is more complicated than this, encompassing lifestyle alterations, medication, etc. A widely accepted, medically sanctioned mode of attacking the myriad components of hypertension. Lifestyle modification becomes the key and involves changes, including diet patterns, daily exercise, stress management, and quitting smoking. Contemporary literature defines the importance of making these alterations for efficient blood pressure control, as demonstrated in the findings of the CDC (2021) [4].

As a lens, an illustrative case in point is a 59-year-old male, wherein the existence of hypertension's rampancy, familial susceptibility, and the life-induced risks come out as a patterned fabric. Herein is a typical case of this patient, who symbolizes a wider group suffering from hypertonia. The first story portrays a patient suffering from high blood pressure and how it slowly builds up, just like in most case scenarios. It then involves a well-thought-of mixture of antihypertensive drugs, which accords with the medical protocol.

To begin with, different views on literature, as highlighted in the work conducted by the CDC (2021), indicate the combined efforts between dietary changes and other drug therapies [4]. Literature suggests that changes in diet are quite resonant with health outcomes. Most notably, the Dash diet is well known, and studies like the NIH (2021) [6]. As shown by AHA (2023), exercise constitutes a fundamental aspect of total therapy for hypertension because of its well-documented impact on lowering blood pressure [7]. Mindfulness-based interventions, outlined in the article by Babak (2022), may become a crucial means of regulating high blood pressure [8]. In addition, a well-known lynchpin in lifestyle change is smoking cessation, which significantly reduces hypertension risk, according to a study by Tsai (2021) [9]. Therefore, the complete management of hypertension is more like a story in which lifestyle changes are paired with medicines to result in an integrated and evidence-based

approach. A holistic approach to this problem involves integrating different strategies healthcare providers acquire. Literature guides this rugged landscape of hypertension control, leading to positive patient healthcare results.

1.2.4. Integrative Approaches

Therefore, nutritional interventions show great promise in addressing a comprehensive hypertension management strategy. Substantial studies have concluded that certain dietary items could be effective in reducing high blood pressure, and one amongst them is curcumin, which is known for its anti-inflammatory character. A study carried out by Hadi (2019) on how curcumin can be used as a natural remedy for blood pressure modulation has shed light on integrative approaches [10]. The disclosure, however, provides an illumination not only on what curcumin can do toward dealing with high blood pressure but also reveals an array of potential applications of the dietary constituents in the targeted handling of hypertension.

Mineral-wise, it is time for magnesium, which plays a lead role in the cardiovascular story. Recently, the comprehensive work of Hadi traversed a vast pool of scientific literature comprising epidemiological studies, RCTs, and meta-analyses [10]. In sum, these different studies indicate an inverse relationship between CVD and magnesium consumption. The discovery makes magnesium a worthwhile dietary supplement, which, in light of traditional hypertension methods, represents a new approach.

Vitamin C appears as yet another primary nutritional intervention in cardiovascular health. Al-Khudairy clearly explained the findings of observational studies and showed an association between Vitamin C consumption and Major Cardiovascular Events involving the Risk Factors of CVDs [11]. Moreover, introducing vitamin C into exploration adds an exciting side to nutrition intervention, which can be used in total control of hypertension. It broadens the landscape to the varied perspectives on food and nutrition. It is an exemplar of an overall diet approach designed for blood pressure management, and it is known as the DASH diet supported by the Centers for Disease Control and Prevention (CDC, 2022) [12]. The diet includes many fruits, vegetables, lean proteins, and reduced salt. The DASH diet fits nicely into integrative care, as one can see the direct link between proper nutrition and heart problems. In this vast expanse of possible options for integrative hypertension care lies an equally extensive range of nutritional interventions that can aid both health personnel as well as those afflicted with hypertension in improving their cardiovascular health profile.

1.3. Case Study Integration

1.3.1. Case1: ISNS Case Study

Hypertension, often known as high blood pressure, is a widespread health issue that has significant effects on cardiovascular health. The ISNS case ponder by gives a comprehensive diagram of hypertension, portraying its categories, hazard variables, and potential complications [13]. The clinical account serves as a foundational grapple for

the broader investigation of hypertension inside the writing survey, advertising bits of knowledge into the multifaceted nature of this condition. The American College of Cardiology and the American Heart Association's classification of blood weight into four categories, extending from ordinary to stage 2 hypertension, builds up a system for understanding the seriousness of this condition. Vitaly, the case think about underscores the regularly asymptomatic nature of hypertension, emphasizing the noteworthiness of schedule checking, as side effects may be shown at progressed and possibly life-threatening stages.

Through a case study, primary versus secondary hypertension, which are two aspects that cause high blood pressure, is portrayed in the paper. The presence of primary hypertension that develops slowly over time and results in atherosclerosis indicates the effect of arterial plaque accumulation on homeostatic mechanisms of blood pressure control. However, primary hypertension is characterized by chronic elevation in blood pressure over time. It does not originate spontaneously due to any underlying conditions such as congenital heart defects or medications, to mention a few that may lead to an increase in BP.

The case also presents a complicated web of hazards related to lifestyle, age, family history, and other illnesses. Because of the interplay of these hazards, hypertension is a complicated condition that requires methodical management. The seriousness of effective medication is highlighted by the potential implications of uncontrolled hypertension, which include heart attacks, strokes, aneurysms, and organ damage. As the case ponder moves to administration methodologies, it presents the cooperative energy of way-of-life alterations and pharmacological mediations. Way of life changes, enveloping dietary alterations, workout, stretch lessening, and smoking cessation, adjust with broader proposals for hypertension administration. Pharmacological intercessions, custom-fitted based on age and ethnicity, reflect the nuanced approach required for successful blood weight control.

1.3.2. Case 2: Addressing Hypertension in the Young

Ekore conducted a seminal case finding that considers hypertension in youthful grown-ups, giving essential knowledge into the predominance, chance components, and complications related to this condition [14]. The view, set in an evangelist healing center in Ibadan, Nigeria, focused on male and non-pregnant female patients aged 18 to 44 for a long time, underscoring the significance of scheduled blood weight checks in this statistic. The essential targets were to distinguish undetected cases of hypertension, survey chance components, and identify complications in youthful grown-ups. The inquiry utilized a semi-structured survey and physical examinations on qualified members attending St. Mary's Catholic Common Clinic. Research facility examinations of blood and pee were conducted for affirmed hypertensive subjects. The hospital-based cross-sectional thinking was traversed from February 2007 to Eminent 2007, including sequential youthful grown-up patients going to the healing center for the primary time.

Out of the 405 members, a considerable portion 124 people (30.6%) were recognized as hypertensive. The cruel age of the subjects was 31.6 ± 6.9 a long time, comprising 38% guys and 62% females. They consider highlighted affiliations between tall blood weight and different variables, counting age, occupation, body mass file (BMI), midsection circumference, and hip circumference. The nearness of clinical proof demonstrating target end-organ harm was critical, with cleared-out ventricular hypertrophy, congestive cardiac disappointment, retinopathy, nephropathy, and temporal ischemic assault recognized among hypertensive people.

The discoveries of Ekore emphasize the presence of undetected cases of hypertension with complications and target end-organ harm in youthful grown-ups in Ibadan, Nigeria [14]. They think about advocates for expanded consideration from family doctors and essential care specialists, emphasizing the significance of case findings for hypertension in this age group. The suggestions amplify past the study's geological setting, with the broader requirement for proactive hypertension screening and administration techniques, especially in different and underrepresented populations. Coordination of this case considered in this writing audit improves understanding of hypertension's signs in youthful grown-ups, emphasizing the worldwide pertinence of custom-fitted mediations and the basis for watchful case finding in assorted healthcare settings. The comprehensive investigation contributes profitable experiences to the broader talk on hypertension, adjusting with the call for nuanced approaches to screening and overseeing this well-being, particularly among youthful grown-ups in changed social and healthcare settings.

1.3.3. Case 3: Newly Diagnosed Hypertension

In a case displayed by Brown (2023), a 45-year-old lady named Jane, whose nom de plume guarantees her secrecy, got to be the center of consideration after her blood weight was essentially hoisted at 170/88 mmHg amid a role-playing workout in an instructing session for wellbeing experts [15]. Jane, despite having no other indications, was alluded to the surgery for advance appraisal after a crisis division visit. The situation underscores the noiseless nature of hypertension, where people may stay asymptomatic, emphasizing the requirement for artful blood weight checks, as highlighted by Nazarko (2021) [16]. The case adjusts with the broader understanding that hypertension is regularly named the 'silent killer,' requiring proactive observing and discovery techniques.

Upon displaying at the surgery, Jane's discussion was conducted with an organized approach, entwining different discussion models for a person-centered approach, as supported by Green (2015), Youthful et al. (2009), and Diamond-Fox (2021) [17-19]. The Calgary-Cambridge show was central in starting the session, emphasizing the significance of a favorable beginning to discussions [18]. The progressed nurture professional guaranteed careful planning optimized the environment, seating courses of action, and investigated Jane's records to set up an establishment for

viable communication and affinity [20]. The adjustment with the standards of person-centered care underscores the centrality of building persistent belief and certainty.

Amid the discussion, a comprehensive clinical history was taken, including successful tuning in and perception aptitudes [21]. The significance of permitting patients like Jane to share their 'story' without interference, known as the 'golden minute,' was emphasized to illustrate regard and honesty to goodness intrigue within the patient's concerns [17]. The approach adjusts to the all-encompassing nature of history-taking, guaranteeing meticulousness and security and helping in a precise conclusion, as recommended by DiamondFox (2021) [20]. Coordination of this case ponder into this writing survey improves understanding of hypertension conclusion in real-world scenarios, emphasizing the challenges of recognizing asymptomatic patients and the significance of careful discussion approaches. The case strengthens the broader story that hypertension frequently avoids quick take notes, requiring proactive screening techniques, particularly in different healthcare settings. By synthesizing this case with existing writing, the audit picks up viable bits of knowledge into the complexities of hypertension conclusion, improving the talk on custom-fitted and successful approaches to hypertension administration.

1.4. Non-Pharmacological Protocols

Among the areas for research in hypertension management, one significant path relates to non-pharmacologic strategies that emphasize exclusive blends. In addition, the case study adds another dimension to the research by including proprietary blends, which are a mixture of drops, sachets, and teaspoons with particular formulations for each person. In addition, this technique is closely related to the recently arising concept of individual medicine in which a customized treatment plan is devised for every patient based on his health characteristics. An excellent example of a possible integrative approach to treatment is including proprietary blends in hypertension management, which fit adequately. These blends serve as an embodiment of the innovative holistic and personalized approach. The idea of tailored treatment supports the multidimensional aspect of hypertension that Harrison have highlighted, as the case study illustrates. As a result, their choice to use customized, unique mixes is a reaction that takes into account a variety of elements that influence high blood pressure [1].

Nevertheless, these proprietary blends emphasize drops, sachets, and teaspoons rather than their pharmacologic counterparts. While conducting the research on hypertension, it is evident that non-pharmacological intervention is paramount due to the widespread nature of the complication [2,5]. Hypertension control normally involves life proprietary blends in managing hypertension under individualized medicine, and integrated health care services are reviewed and explained. Such a case study, which focuses on drops, sachets, and a teaspoon being vehicles for the above blends, paves the way for further research into the bio-availability and effectiveness of such formulations.

2. Conclusion

Finally, this comprehensive literature review traverses the complicated terrain of hypertension, peeling back the complex multifactorial layers of its underlying anatomical mechanisms and identifying diverse causal risks, debilitating consequences, and therapeutic methods. The role played by genetic, lifestyle, and environmental factors is stressed while highlighting sources like [1,2,5]. It also explores why such risk factors matter, including everything from a person's age or family history to lifestyle decisions and underlying health concerns. However, integrative ways have become vital, incorporating lifestyle change, traditional treatment, and novel therapies in unique formulas. Using various case studies, such as those by Ekore or the clinical scenario provided by Brown (2023), adds to the story and gives a realistic perspective of what happens within organizations [14,15]. In this literature synthesis, traversing through the different aspects of hypertension leads to a complex appreciation of individualized and comprehensive approaches in hypertension management based on the constellation of variables associated with high blood pressure.

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