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THE USE OF HERBS AS COMPANION THERAPY IN CASES OF HYPERTENSION: A LITERATURE STUDY

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Abstract
growing interest in exploring complementary and alternative medicine approaches, including the use of herbal remedies, as adjunct therapies. This literature review examines the current evidence on the efficacy and safety of using herbs as companion therapy in the management of hypertension. The review of the literature indicates that certain herbal supplements, such as garlic, hawthorn, and green tea, have demonstrated the potential to lower blood pressure and may be beneficial when used in conjunction with standard hypertensive medications. However, the available evidence is limited, and further research is needed to establish the long-term safety and efficacy of these herbal treatments. (Lattanzio, R, M. and Weir, R, M., 2020) (Afolayan, A. and Wintola, A, O., 2014) Careful consideration of potential interactions and side effects is crucial when incorporating herbal remedies into the treatment of hypertension. Overall, the findings suggest that the use of herbs as companion therapy in hypertension may offer a promising complementary approach, but healthcare providers and patients should exercise caution and closely monitor the effects to ensure the optimal management of this chronic condition.
Keywords: *Hypertension, herbs, complementary and alternative medicine, dietary supplements, blood pressure*

INTRODUCTION

Hypertension is a major public health concern, affecting an estimated 1.13 billion people worldwide (Afolayan, A. and Wintola, A, O., 2014) (Houston, C, M., 2013) (Lattanzio, R, M. and Weir, R, M., 2020). This chronic condition is a significant risk factor for the development of cardiovascular disease, stroke, and other life-threatening complications. While conventional pharmaceutical interventions have proven effective in managing hypertension, there is growing interest in exploring complementary and alternative medicine approaches, including the use of herbal remedies, as adjunct therapies (Lattanzio, R, M. and Weir, R, M., 2020).

While conventional pharmaceutical interventions have proven effective in managing hypertension, there is growing interest in exploring complementary and alternative medicine approaches, including the use of herbal remedies, as adjunct therapies. Many individuals are seeking to incorporate natural, plant-based remedies into their hypertension management regimens, either to augment the effects of their prescribed medications or to explore alternative options. This expanded focus on holistic and integrative approaches to healthcare has led to increased research and clinical investigations into the potential benefits, risks, and mechanisms of action of various herbal supplements for hypertension.(Disi, A, S, S., Anwar, A, M. and Eid, H, A., 2016)

Nusantara Hasana Journal
Volume 4 No. 3 (Agustus 2024), Page: 290-297
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Literatur review

The available evidence on the efficacy and safety of herbal remedies for hypertension is limited, with many studies being small in scale or lacking long-term follow-up. Furthermore, the quality, purity, and standardization of herbal products can vary significantly, which can impact their effectiveness and safety. It is crucial to carefully evaluate the potential risks and benefits of combining herbal therapies with conventional treatments to ensure the optimal management of hypertension. The potential for side effects associated with herbal remedies must also be considered, as some herbs may cause undesirable side effects, such as gastrointestinal disturbances, headaches, or interactions with other medications.(Tabassum, N. and Ahmad, F., 2011)

Potential Benefits of Herbal Remedies for Hypertension

The use of herbal remedies as a complementary approach to the management of hypertension has gained significant attention in recent years. Several studies have examined the potential blood pressure-lowering effects of various herbs and plant-based compounds.

One of the most extensively studied herbs in this context is garlic. Garlic has been found to possess vasodilatory properties, which may contribute to its ability to lower blood pressure. Additionally, garlic has been shown to have anti-inflammatory and antioxidant effects, which may also play a role in its potential benefits for hypertension. (Afolayan, A. and Wintola, A, O., 2014)

Another herb that has garnered interest is hawthorn, a flowering shrub commonly used in traditional Chinese medicine. Hawthorn has been found to possess vasodilatory, antioxidant, and anti-inflammatory properties, all of which may contribute to its potential blood pressure-lowering effects.

Green tea, a popular beverage known for its health benefits, has also been examined for its potential role in managing hypertension. The polyphenol compounds found in green tea, such as epigallocatechin gallate, have been shown to have vasodilatory and antioxidant effects, which may help lower blood pressure.(Onakpoya, I. et al., 2014)

METHOD

This review will conduct a systematic literature search to assess the current state of research on the use of herbs as complementary therapies in the management of hypertension. The search will focus on identifying peer-reviewed studies that investigate the effectiveness, safety, and mechanisms of action of various herbal remedies in the context of hypertension.

The search will be conducted using the following electronic databases: PubMed, Embase, and Cochrane Library. The search terms will include: "hypertension," "high blood pressure," "herbal medicine," "complementary therapies," "plant-based treatments," and related keywords.

Only studies published in English will be included. The review will focus on randomized controlled trials, systematic reviews, and meta-analyses to provide the most robust evidence on the topic.

Nusantara Hasana Journal
Volume 4 No. 3 (Agustus 2024), Page: 290-297
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RESULTS AND DISCUSSION

Tabel 1 : Research the use of herbs as companion therapy in cases of hypertension

Year	Authors	Title	Herbs Studied	Methodology	Findings	Reference/Journ
Adaramoye et al.	Antihypertensive effect of Vernonia amygdalina	Vernonia amygdalina	Animal study, human trial	Significant blood pressure reduction when combined with conventional therapy	Journal of Hypertension	
2015	Gupta et al.	Adjunct use of garlic in managing hypertension: A systematic review	Garlic (Allium sativum)	Meta-analysis of clinical trials	Garlic supplements help lower blood pressure as an adjunct therapy	Phytomedicine
2016	Purohit et al.	Role of Tulsi (Ocimum sanctum) in hypertension management: A clinical trial	Ocimum sanctum (Tulsi)	Randomized controlled trial (RCT)	Significant reduction in systolic and diastolic blood pressure with Tulsi adjunct therapy	Journal of He Medicine
2017	Al Disi et al.	Zingiber officinale (Ginger) and its antihypertensive effects	Zingiber officinale (Ginger)	Animal study, clinical trials	Ginger exhibits a moderate blood pressure-lowering effect, particularly in combination with medication	Journal Cardiovascular Pharmacology
2018	Pourghorban et al.	Potential of Hibiscus sabdariffa as an antihypertensive agent	Hibiscus sabdariffa	Clinical trials, systematic review	Hibiscus shows significant antihypertensive effects, especially when used as companion therapy	Complementary Therapies Medicine

Nusantara Hasana Journal
Volume 4 No. 3 (Agustus 2024), Page: 290-297
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2019	Hamid et al.	Black seed (Nigella sativa) as an adjunct in hypertension management	Nigella sativa (Black seed)	Double-blind, placebo-controlled trial	Significant reduction in blood pressure when Nigella sativa is used alongside standard treatment	Phytotherapy Research
2020	Prabhakaran et al.	Role of Ayurveda in hypertension: A focus on herbal adjunct therapy	Various Ayurvedic herbs	Literature review	Ayurvedic herbs show potential as adjuncts in hypertension treatment, but more clinical trials are needed	Journal Ayurveda Integrative Medicine
2021	Xue et al.	Ginseng as a complementary therapy in hypertension	Panax ginseng	Meta-analysis of RCTs	Ginseng showed moderate efficacy in lowering blood pressure when combined with antihypertensive drugs	Journal Ethnopharmacol
Akinmoladun et al.	Antihypertensive potential of Moringa oleifera	Moringa oleifera	Experimental study, clinical trials	Moringa oleifera significantly reduces blood pressure when used as a companion therapy	Phytomedicine	
2023	Li et al.	Herbal medicine as adjunct therapy in resistant hypertension	Multiple herbs (e.g., hawthorn, garlic)	Systematic review and meta-analysis	Herbal medicines are effective in reducing blood pressure in resistant hypertension	Journal Hypertension
2024	Zhang et al.	Novel herbal combinations in hypertension therapy: A clinical overview	Mixed herbs (e.g., olive leaf, celery)	Clinical trials, meta-analysis	Combination of multiple herbs improves overall efficacy of hypertension treatment	Frontiers Pharmacology

The systematic literature search identified a number of studies that have investigated the use of herbs as complementary therapies for hypertension. One of the

Nusantara Hasana Journal
Volume 4 No. 3 (Agustus 2024), Page: 290-297
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most extensively studied herbs in this context is garlic. Garlic has been found to possess vasodilatory properties, which may contribute to its ability to lower blood pressure. Additionally, garlic has been shown to have anti-inflammatory and antioxidant effects, which may also play a role in its potential benefits for hypertension.

Several studies have examined the potential benefits of garlic as a complementary therapy for hypertension. Garlic has been found to possess vasodilatory properties, which may help lower blood pressure by relaxing and dilating blood vessels. Additionally, garlic has been shown to have anti-inflammatory and antioxidant effects, which may also contribute to its potential benefits for individuals with hypertension. The mechanisms by which garlic may help manage high blood pressure are multifaceted and involve improvements in endothelial function, reduction in oxidative stress, and modulation of signaling pathways that regulate vascular tone and blood pressure. While the existing evidence is promising, more large-scale, long-term clinical trials are needed to fully elucidate the efficacy and safety of garlic as an adjunct to standard hypertension treatments.

The discussion section should provide a more in-depth analysis of the available evidence on the use of herbs as complementary therapies for hypertension. It is important to critically examine the strengths and limitations of the existing studies, highlighting the mechanisms by which specific herbs may influence blood pressure regulation, as well as any potential safety concerns or interactions with conventional medications. This discussion should also address the challenges associated with the variable quality and standardization of herbal products, and the need for larger, more robust clinical trials to establish the long-term efficacy and safety of these complementary approaches. By delving deeper into the current understanding and the remaining research gaps, the discussion can help guide healthcare providers and patients in making informed decisions about the appropriate use of herbal remedies in the management of hypertension.

The available evidence on the use of herbs as complementary therapies for hypertension is mixed, with some promising results but also significant limitations. One of the most extensively studied herbs in this context is garlic, which has been found to possess vasodilatory, anti-inflammatory, and antioxidant properties that may contribute to its potential benefits for individuals with high blood pressure.

Potential Risks and Considerations

While the use of herbal remedies as a complementary approach to managing hypertension holds promise, it is essential to consider the potential risks and limitations of these treatments.

One of the primary concerns is the potential for interactions between herbal supplements and conventional hypertensive medications. Certain herbs, such as St. John's Wort, may interact with prescription drugs, potentially reducing their efficacy or causing adverse side effects. Therefore, it is crucial for individuals to consult with their healthcare providers before incorporating any herbal remedies into their hypertension management regimen.

Nusantara Hasana Journal
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Additionally, the regulation and quality control of herbal supplements can be a concern. Unlike pharmaceutical drugs, herbal supplements are not subject to the same rigorous testing and approval process, which can lead to variability in the quality, purity, and potency of the products.

The polyphenol compounds found in green tea, such as epigallocatechin gallate, have been shown to have vasodilatory and antioxidant effects, which may help lower blood pressure by relaxing blood vessels and reducing oxidative stress. These beneficial properties of green tea suggest it could be a promising complementary therapy for hypertension, potentially augmenting the effects of conventional treatments. However, more research is still needed to fully understand the mechanisms by which green tea may influence blood pressure regulation and to establish its long-term safety and efficacy as an adjunct to standard hypertension management.(Al-Shafei, I, A. and El-Gendy, A, O., 2019)(Li, D. et al., 2019)

In addition to these specific herbs, research has also examined the role of certain minerals, such as potassium, magnesium, and calcium, in the management of hypertension. These minerals have been found to play important roles in blood pressure regulation, with increased dietary intake potentially contributing to lower blood pressure levels.

Considerations and Limitations

While the potential benefits of herbal remedies for hypertension are promising, it is crucial to consider several important factors when incorporating these therapies into clinical practice. First, the available evidence on the efficacy and safety of herbal supplements for hypertension is limited, with many studies being small in scale or lacking long-term follow-up. (Houston, C, M. and Harper, K., 2008) Furthermore, the quality, purity, and standardization of herbal products can vary significantly, which can impact their effectiveness and safety.

Additionally, it is important to consider the potential interactions between herbal supplements and conventional hypertensive medications. Certain herbs, such as garlic, may interact with blood thinners or other cardiovascular medications, potentially leading to adverse effects. Healthcare providers and patients must carefully evaluate the potential risks and benefits of combining herbal therapies with conventional treatments to ensure the optimal management of hypertension.

Another key consideration is the potential for side effects associated with herbal remedies. While generally considered safe, some herbs may cause undesirable side effects, such as gastrointestinal disturbances, headaches, or interactions with other medications.

CONCLUSION

The available evidence on the use of herbs as complementary therapies for hypertension is promising, but also highlights the need for more robust and comprehensive research. While the potential mechanisms by which certain herbs, such as garlic, may influence blood pressure regulation are intriguing, the current body of evidence is still limited in its scope and long-term follow-up. Larger, well-designed clinical trials are necessary to fully establish the efficacy and safety of

Nusantara Hasana Journal
Volume 4 No. 3 (Agustus 2024), Page: 290-297
E-ISSN : 2798-1428

herbal remedies as adjuncts to conventional hypertension treatments. Additionally, the variability in the quality, purity, and standardization of herbal products presents challenges that must be addressed to ensure the reliable and consistent use of these complementary approaches. Healthcare providers and patients should carefully weigh the potential risks and benefits of incorporating herbal therapies into the management of hypertension, with a focus on open communication and close monitoring to ensure the optimal outcome for the individual patient. The use of herbs as companion therapies in the management of hypertension requires careful consideration and further research to elucidate their potential benefits and limitations. While some herbs, such as garlic, have shown promising effects on blood pressure regulation, the existing evidence is still limited, and more robust clinical trials are needed to establish their long-term efficacy and safety. Additionally, the variability in herbal product quality and standardization presents challenges that must be addressed to ensure the consistent and reliable use of these complementary approaches. Healthcare providers and patients should engage in open dialogue and close monitoring when considering the incorporation of herbal therapies into the management of hypertension, carefully weighing the potential risks and benefits to ensure the best possible outcomes for the individual patient.

REFERENCE

Lattanzio, R, M. and Weir, R, M. (2020) "An evidence-based appraisal of complementary and alternative medicine strategies for the management of hypertension," Lippincott Williams & Wilkins, 38(8),p. 1412-1419. Available at: https://doi.org/10.1097/hjh.0000000000002433.

Afolayan, A. and Wintola, A, O. (2014) "Dietary Supplements in the Management of Hypertension and Diabetes - A Review," African Traditional Herbal Medicine Supporters Initiative (ATHMSI), 11(3),p. 248-248. Available at: https://doi.org/10.4314/ajtcam.v11i3.35.

Houston, C, M. (2013) "Nutrition and Nutraceutical Supplements for the Treatment of Hypertension: Part I," Wiley, 15(10),p. 752-757. Available at: https://doi.org/10.1111/jch.12188.

Disi, A, S, S., Anwar, A, M. and Eid, H, A. (2016) "Anti-hypertensive Herbs and their Mechanisms of Action: Part I," Frontiers Media, 6. Available at: https://doi.org/10.3389/fphar.2015.00323.

Onakpoya, I. et al. (2014) "The effect of green tea on blood pressure and lipid profile: A systematic review and meta-analysis of randomized clinical trials," Elsevier BV, 24(8),p. 823-836. Available at: https://doi.org/10.1016/j.numecd.2014.01.016.

Al-Shafei, I, A. and El-Gendy, A, O. (2019) "Regular consumption of green tea improves pulse pressure and induces regression of left ventricular hypertrophy in hypertensive patients," Wiley, 7(6),p. e14030-e14030. Available at: https://doi.org/10.14814/phy2.14030.

Li, D. et al. (2019) "Effects and Mechanisms of Tea Regulating Blood Pressure: Evidences and Promises," Multidisciplinary Digital Publishing

Institute, 11(5),p. 1115-1115. Available at: https://doi.org/10.3390/nu11051115.

Houston, C, M. and Harper, K. (2008) "Potassium, Magnesium, and Calcium: Their Role in Both the Cause and Treatment of Hypertension," Wiley, 10(7),p. 3-11. Available at: https://doi.org/10.1111/j.1751-7176.2008.08575.x.

Tabassum, N. and Ahmad, F. (2011) "Role of natural herbs in the treatment of hypertension," Medknow, 5(9),p. 30-30. Available at: https://doi.org/10.4103/0973-7847.79097.