Review Article

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PRINCIPLES OF AYURVEDIC MANAGEMENT OF HRIDROGA (CARDIAC DISORDERS): A CLASSICAL AND CONTEMPORARY PERSPECTIVE

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ABSTRACT

Cardiovascular diseases (CVDs) remain the leading cause of morbidity and mortality worldwide despite substantial advances in pharmacotherapy, interventional cardiology, and cardiac rehabilitation. The increasing prevalence of coronary artery disease, heart failure, arrhythmias, hypertension, and associated metabolic disorders underscores the need for comprehensive strategies that emphasise prevention, individualised care, and long-term cardiovascular health. Ayurveda provides a holistic framework for preventing and managing cardiac disorders, collectively described as Hridroga, by restoring physiological homeostasis and correcting underlying pathogenic factors. This review critically examines the classical Ayurvedic concepts of Hridaya and Hridroga, including their etiopathogenesis (Nidana and Samprapti), classification, clinical manifestations, diagnostic principles, and therapeutic approaches described in the Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, and other classical texts. The fundamental principles of management—including Nidana Parivarjana, Pathya-Apathya, Deepana-Pachana, Shodhana, Shamana, Rasayana, and lifestyle modification—are discussed in the context of contemporary cardiovascular science. Emerging evidence from experimental studies, randomised controlled trials, observational studies, and case reports suggests that several Ayurvedic interventions possess cardioprotective, antioxidant, anti-inflammatory, antihyperlipidemic, endothelial-protective, and myocardial-supportive properties, supporting their potential role as adjuncts to conventional cardiovascular care. Integrating classical Ayurvedic principles with contemporary evidence may offer a comprehensive and patient-centred approach to cardiovascular prevention, management, and rehabilitation. Nevertheless, further well-designed multicenter clinical trials and standardised therapeutic protocols are required to establish the efficacy, safety, and broader clinical applicability of Ayurvedic interventions in integrative cardiology.

Keywords: Ayurveda, Cardiovascular Diseases, Hridroga, Integrative Cardiology.

INTRODUCTION

Cardiovascular diseases (CVDs) are the leading cause of morbidity and mortality worldwide and continue to pose a major public health challenge despite remarkable advances in modern medicine. According to the World Health Organization (WHO), nearly 20.5 million deaths annually are attributed to cardiovascular diseases, accounting for almost one-third of all global deaths. Coronary artery disease (CAD), heart failure, hypertension, stroke, arrhythmias, and valvular heart diseases collectively contribute to substantial disability, diminished quality of life, and escalating healthcare expenditure. The growing prevalence of obesity, diabetes mellitus, dyslipidaemia, sedentary lifestyles, unhealthy dietary practices, tobacco use, and chronic psychosocial stress has further accelerated the global burden of cardiovascular disorders, particularly in low- and middle-income countries.[1-3]

Contemporary cardiology has advanced disease diagnosis and management through evidence-based pharmacotherapy, percutaneous coronary interventions, cardiac surgery, implantable cardiac devices, and structured cardiac rehabilitation programmes. These advances have markedly improved survival and reduced mortality following acute cardiovascular events. Nevertheless, cardiovascular diseases remain chronic, multifactorial disorders requiring lifelong management. Recurrent cardiac events, polypharmacy, treatment-related adverse effects, economic burden, and persistent residual cardiovascular risk continue to challenge both clinicians and healthcare systems. Consequently, interest is growing in complementary and integrative approaches that emphasise disease prevention, individualised management, lifestyle modification, and long-term cardiovascular health alongside conventional therapy.

Ayurveda, India's traditional system of medicine, conceptualises health as a dynamic equilibrium among Dosha, Dhatu, Agni, Mala, and Srotas, while recognising how diet, lifestyle, environment, and psychological factors influence disease development. Rather than viewing the heart solely as a mechanical organ that pumps blood, Ayurveda considers Hridaya the vital seat of Prana, Ojas, Manas, and Chetana, reflecting its central role in sustaining physiological, psychological, and spiritual well-being. Classical Ayurvedic texts identify Hridaya as one of the three Trimarma and as the Mula Sthana of Rasavaha and Pranavaha Srotas, thereby emphasising its importance in circulation, respiration, tissue nourishment, and maintenance of life.[4-6]

Cardiac disorders are collectively described under the broad entity of Hridroga, which encompasses a spectrum of conditions resulting from disturbances in Dosha, impaired Agni, formation of Ama, vitiation of Rasa and Rakta Dhatus, and dysfunction of Rasavaha and Pranavaha Srotas. Classical descriptions of Hridroga include detailed accounts of its causative factors (Nidana), pathogenesis (Samprapti), clinical manifestations, classification, and individualised therapeutic principles. Although the Ayurvedic framework differs fundamentally from

contemporary biomedical concepts, several investigators have proposed functional parallels between classical concepts such as Dhamani Pratichaya, Srotorodha, and Ama and modern mechanisms including atherosclerosis, endothelial dysfunction, chronic inflammation, oxidative stress, and metabolic dysregulation.[7] These comparisons should be interpreted as conceptual analogies rather than direct pathological equivalence.

The management of Hridroga extends beyond symptomatic treatment and is based on a comprehensive therapeutic approach that includes Nidana Parivarjana (elimination of causative factors), Deepana-Pachana (restoration of digestive and metabolic function), Shodhana (biopurification), Shamana (pacification therapy), Rasayana (rejuvenation), appropriate Pathya-Apathya (dietary and lifestyle regulation), and maintenance of psychological well-being through Satvavajaya Chikitsa. These principles aim to restore systemic homeostasis, improve tissue function, prevent disease progression, and reduce recurrence.

In recent years, scientific interest in Ayurvedic cardiology has expanded considerably. Experimental studies have demonstrated antioxidant, anti-inflammatory, antihyperlipidaemic, antiatherogenic, endothelial-protective, and cardioprotective properties of several medicinal plants and classical Ayurvedic formulations. Furthermore, emerging clinical evidence from randomised controlled trials, observational studies, and case reports has explored the role of Ayurvedic interventions as adjuncts to standard care in stable coronary artery disease, cardiac rehabilitation following myocardial infarction, ventricular arrhythmias, and other cardiovascular disorders. Although the current evidence remains heterogeneous and requires further high-quality multicentre clinical trials, these investigations provide a growing scientific basis for integrative cardiovascular care.

Despite the growing body of literature, comprehensive syntheses that integrate the classical Ayurvedic understanding of Hridroga with contemporary cardiovascular science and emerging clinical evidence remain limited. Therefore, this review critically examines the classical concepts of Hridaya and Hridroga, discusses the fundamental principles of Ayurvedic management, evaluates available experimental and clinical evidence, and highlights Ayurveda's potential role in an evidence-informed integrative approach to cardiovascular prevention, management, and rehabilitation.

Concept of Hridaya in Ayurveda

The concept of Hridaya is central to Ayurvedic physiology and pathology. Unlike contemporary medicine, which primarily views the heart as a muscular organ that pumps blood, Ayurveda attributes a much broader functional significance to Hridaya. It is regarded not only as the centre of circulation but also as the abode of vitality, consciousness, mental functions, and the essence of life. This multidimensional understanding reflects Ayurveda's holistic philosophy, in which structural integrity, physiological regulation, and psychological well-being are closely interconnected.

Traditionally, the word Hridaya is explained through the derivation of three Sanskrit syllables: Hri, meaning "to receive"; Da, meaning "to give"; and Ya, meaning "to move or circulate." Collectively, these terms symbolize the continuous physiological functions of the heart—receiving, distributing, and maintaining the circulation of Rasa throughout the body. Although this interpretation draws on traditional Nirukti rather than formal Sanskrit grammar, it effectively illustrates the dynamic physiological role Ayurveda assigns to Hridaya.

Classical Ayurvedic literature consistently recognises Hridaya as one of the body's most vital organs. Charaka Samhita identifies Hridaya among the three Trimarma, together with Shira and Basti, emphasising that injury to any of these structures threatens life because they govern essential physiological functions.[8] Furthermore, Charaka describes Hridaya as the seat of Chetana and identifies it as the Mula Sthana of Rasavaha Srotas, highlighting its indispensable role in maintaining systemic nourishment through the circulation of Rasa.

Similarly, Sushruta Samhita classifies Hridaya as a Sadyah Pranahara Marma, indicating that severe trauma to this structure may result in immediate fatality. Sushruta further explains that numerous Dhamanis originate from Hridaya and distribute nutrients and vitality throughout the body, thereby maintaining the functional integrity of all tissues and organs.[9]

In the Ashtanga Hridaya, Vagbhata expands this concept by describing Hridaya as the seat of Prana and Ojas. Prana governs vital physiological activities, whereas Ojas represents the essence of all Dhatus and is responsible for strength, immunity, vitality, and disease resistance. Consequently, preserving Hridaya is essential for maintaining both physical health and overall life force.[10]

Ayurveda also attributes important psychological functions to Hridaya. It is regarded as the seat of Manas, Buddhi, Chetana, and Smriti, illustrating the close relationship between cardiovascular function and mental or emotional health. This holistic view differs considerably from the conventional anatomical view of the heart and provides a conceptual basis for understanding how emotional disturbances, stress, and psychological factors contribute to the development of Hridroga.

Thus, the classical Ayurvedic concept of Hridaya extends beyond an anatomical structure and represents an integrated functional centre responsible for circulation, vitality, consciousness, and psychophysiological regulation. This comprehensive understanding serves as the foundation for the Ayurvedic interpretation of Hridroga and its individualised therapeutic principles.

Etiopathogenesis (Nidana and Samprapti) of Hridroga

Nidana (Etiological Factors)

Ayurveda considers Hridroga a multifactorial disorder resulting from prolonged exposure to inappropriate dietary habits (Ahara), unhealthy lifestyle practices (Vihara), psychological disturbances (Manasika Nidana), and impaired metabolic function. The classical texts emphasise that disease does not develop abruptly; rather, it evolves through the cumulative interaction of etiological factors that disturb the equilibrium of Dosha, impair Agni, and eventually affect the structural and functional integrity of Hridaya.[11]

Among dietary factors, excessive consumption of Guru (heavy), Snigdha (unctuous), Ati-Madhura (excessively sweet), Ati-Lavana (salty), Ati-Amla (sour), and Abhishyandi Ahara (channel-obstructing foods) is considered detrimental to cardiovascular health. Irregular eating habits, overeating, consumption of incompatible food combinations (Viruddha Ahara), and intake of improperly digested food further aggravate Dosha and impair Agni, leading to the formation of Ama.[12]

Lifestyle-related factors include physical inactivity, excessive physical exertion, sleep disturbances, suppression of natural urges (Vegadharana), excessive alcohol consumption, smoking, and chronic psychological stress. Emotional factors such as Shoka

(grief), Bhaya (fear), Krodha (anger), and Chinta (anxiety) are also recognised as important contributors to Dosha imbalance, particularly affecting Vata and Sadhaka Pitta. These observations highlight the holistic Ayurvedic perspective that cardiovascular disorders arise through the interaction of physical, metabolic, and psychological determinants rather than isolated organ pathology.

Samprapti (Pathogenesis)[13-14]

Table 1: Samprapti Ghatakas of Hridroga (Pathogenic Factors Involved)

Component	Involvement
Dosha	Vata (predominant), associated Pitta and Kapha
Dushya	Rasa, Rakta, Mamsa, Meda
Agni	Jatharagni and Dhatvagni Mandya
Ama	Present in the initial stages and contributes to Srotorodha
Srotas	Rasavaha Srotas, Pranavaha Srotas
Srotodushti	Sanga (obstruction) predominantly
Adhisthana	Hridaya
Rogamarga	Madhyama Rogamarga
Udbhava Sthana	Amashaya
Vyakta Sthana	Hridaya

Understanding these Samprapti Ghatakas is essential for selecting appropriate therapeutic interventions, as Ayurvedic management aims not merely to relieve symptoms but to correct the underlying pathogenic mechanisms by restoring Agni, eliminating Ama, normalising Dosha, and preserving the physiological functions of Hridaya.

Classification of Hridroga

Classical Ayurvedic texts classify Hridroga into five major types based on the predominant vitiated Dosha: Vataja, Pittaja, Kaphaja, Sannipataja, and Krimija Hridroga. Although all three Dosha may participate in the disease process, the predominant Dosha determines the clinical manifestations, severity, prognosis, and therapeutic approach.

Vataja Hridroga

Vataja Hridroga is characterised by severe or pricking chest pain, palpitation, breathlessness, tremors, anxiety, and syncope due to aggravated Vata, particularly Vyana Vata. It is considered the most common form of Hridroga.

Pittaja Hridroga

Pittaja Hridroga presents with a burning sensation in the chest, excessive thirst, perspiration, fever, dizziness, and irritability, reflecting Pitta Dosha predominance.

Kaphaja Hridroga

Kaphaja Hridroga is characterised by heaviness in the chest, lethargy, nausea, excessive sleep, anorexia, and mild dyspnoea due to Kapha accumulation and obstruction of Srotas. Ayurveda describes Dhamani Pratichaya as a functional analogy to atherosclerotic vascular changes.

Sannipataja Hridroga

Sannipataja Hridroga results from the simultaneous aggravation of all three Dosha and manifests with severe chest pain, dyspnoea, syncope, weakness, and poor prognosis.

Krimija Hridroga

Krimija Hridroga is attributed to Krimi associated with chronic Ama accumulation and is characterised by cardiac pain, heaviness, and discomfort.

The fivefold classification of Hridroga highlights the individualised diagnostic approach of Ayurveda, wherein disease presentation and management are determined by Dosha predominance and associated pathophysiological changes rather than by structural abnormalities alone.

Principles of Ayurvedic Management of Hridroga

Ayurvedic management of Hridroga is holistic and individualised, aiming to eliminate underlying causes, correct disturbed physiological balance, restore normal cardiac function, and prevent disease recurrence. Treatment is planned after careful assessment of Dosha predominance, disease stage, Agni, Ama, Prakriti, Rogi Bala, and Roga Bala. Unlike symptom-oriented management, Ayurveda emphasises correcting the fundamental pathological processes that drive disease development. The principal therapeutic strategies include Nidana Parivarjana, Deepana-Pachana, Shodhana, Shamana, Rasayana, Pathya-Apathya, and Satvavajaya Chikitsa.

Nidana Parivarjana

Nidana Parivarjana (elimination of etiological factors) is the first and most fundamental principle in the management of Hridroga. Avoidance of improper diet, sedentary lifestyle, excessive physical exertion, suppression of natural urges, tobacco and alcohol consumption, and psychological stress helps prevent further Dosha aggravation and disease progression. Correction of these modifiable risk factors forms the cornerstone of both prevention and treatment.

Deepana and Pachana

Impaired Agni and Ama accumulation are major contributors to the pathogenesis of Hridroga. Therefore, Deepana (enhancement of digestive fire) and Pachana (digestion of Ama) restore normal metabolism, improve tissue nutrition, and facilitate Dosha balance before initiating other therapeutic interventions.

Shodhana Chikitsa

In appropriately selected patients, Shodhana therapy is recommended to eliminate vitiated Dosha from the body. Depending on the predominant Dosha and disease condition, procedures such as Virechana, Basti, and selected Panchakarma therapies may be advised. These interventions aim to restore physiological equilibrium, improve Srotas patency, and reduce disease recurrence.

Shamana Chikitsa

Shamana therapy focuses on pacifying aggravated Dosha through individualised administration of herbal medicines and classical formulations. Drugs possessing Hridya, Balya, Rasayana, Medohara, and Lekhana properties are selected according to the patient's clinical condition and Dosha predominance.

Rasayana Chikitsa

Rasayana therapy plays an important role during recovery and long-term cardiovascular care. It aims to improve tissue nourishment, enhance Ojas, strengthen cardiac function, delay disease progression, and reduce recurrence by rejuvenating the body and maintaining physiological resilience.

Pathya and Apathya

Appropriate dietary and lifestyle regulation constitutes an integral component of Ayurvedic cardiac care. To maintain cardiovascular health, the text recommends easily digestible food, regular physical activity, adequate sleep, stress management, and avoidance of incompatible dietary practices. Conversely, avoid excessive intake of heavy, fatty, salty, and processed foods, along with physical inactivity and mental stress.

Satvavajaya Chikitsa

Given the close link between emotional factors and cardiac function, Satvavajaya Chikitsa is recommended to improve psychological well-being by regulating the mind, supporting emotional balance, and promoting healthy behavioural practices. This approach complements physical treatment and contributes to long-term cardiovascular health.

The Ayurvedic management of Hridroga therefore integrates preventive, curative, rehabilitative, and promotive strategies through individualised therapeutic planning. By addressing both the underlying pathophysiology and patient-specific factors, this

comprehensive approach aims to restore systemic homeostasis, improve cardiac function, and enhance overall quality of life.

Role of Panchakarma in the Management of Hridroga

Panchakarma is an important therapeutic modality in Ayurveda for eliminating vitiated Dosha and restoring physiological homeostasis. In managing Hridroga, Panchakarma is not administered routinely; it is selected judiciously after evaluating the patient's Dosha predominance, disease stage, Agni, Bala, age, and associated comorbidities. The primary objective of Panchakarma is to remove accumulated Dosha, restore Srotas patency, improve tissue nourishment, and enhance the efficacy of subsequent Shamana and Rasayana therapies.

Virechana

Among Shodhana procedures, Virechana is particularly indicated in Pittaja and Kaphaja Hridroga, where excessive Pitta, Kapha, and Ama drive disease progression. Therapeutic purgation helps eliminate vitiated Dosha, improve metabolic activity, and restore normal Agni function. Classical texts describe Virechana as an effective measure for disorders associated with Pitta predominance and obstruction of physiological channels.

Basti

Basti is regarded as the principal treatment for disorders involving Vata Dosha, particularly Vataja Hridroga. By regulating Vata, Basti helps restore normal physiological functions, improves circulation, and supports systemic homeostasis. Depending on the patient's condition, Anuvasana Basti or Niruha Basti may be employed as part of a comprehensive therapeutic plan.

Supportive Procedures

Supportive therapies such as Abhyanga, Swedana, and other external procedures may be used selectively to improve circulation, relieve muscular stiffness, reduce stress, and enhance overall well-being. Always individualise their application according to Dosha, disease severity, and patient strength.

Current Evidence

Recent scientific evidence suggests that Ayurvedic interventions, including Panchakarma, may provide beneficial adjunctive effects in cardiovascular disorders. A recent review reported that Shodhana procedures, particularly Virechana, may improve lipid metabolism, reduce oxidative stress, and attenuate inflammation, thereby contributing to cardiovascular protection.[15]

Table 2: Characteristics of Included Studies

Author	Country	Study Design	Population/ Sample	Intervention	Comparator	Duration	Primary Outcomes	Key Findings
Salerno *et al.*	USA	Double-blind Randomized Placebo-Controlled Trial	138 adults with established CVD/high cardiovascular risk	Maharishi Amrit Kalash (MAK-4 & MAK-5)	Vitamin C/E and placebo	12 months	Endothelial function, cIMT, BP, lipid profile	Improved endothelium-independent vascular function (BART-NMD); no significant effect on FMD, cIMT, BP or lipid profile.
Lin *et al.*	Taiwan	Single-blind Randomized Controlled Trial	60 mental health professionals	Weekly yoga sessions	No exercise	12 weeks	HRV, work-related stress	Significant reduction in stress and improvement in autonomic nervous system activity.
Sharma *et al.*	India	Double-blind Randomized Placebo-Controlled Study Protocol	100 patients with stable coronary artery disease	Pushkar Guggulu + Haritaki + standard therapy	Placebo + standard therapy	180 days	SAQ, CCS grade, IL-6, pro-BNP, QoL	Ongoing clinical trial designed to evaluate adjunct Ayurvedic therapy; results pending.
Kajaria & Khobarkar (2023)	India	Case Report	43-year-old male with monomorphic ventricular tachycardia	Ayurvedic medicines (Dadimashtaka Churna, Yogendra Rasa, Swarnagairika, Mahatriphala Ghrita, Abhayarishta, Kutaki)	None	24 days	ECG and clinical symptoms	Complete symptom relief with normalization of ECG after treatment.
Ponnam *et al.* (2021)	India	Case Series	Five patients with hypertriglyceridemia	Fucus vesiculosus mother tincture	None	4 months	Triglyceride and lipid profile	Triglycerides normalized in all patients; LDL and cholesterol improved in some cases.
Mithra (2020)	India	Case Report	40-year-old female with rheumatic valvular heart disease	Comprehensive Ayurvedic management (Langhana, Virechana, Rasayana, herbal-mineral formulations, Arjuna Ksheerapaka, lifestyle measures)	None	11 months	Mitral valve area, symptoms, cardiovascular function	Mitral valve area improved from 1.3 cm^2 to 3.52 cm^2 with marked symptomatic and functional improvement.
Laddha *et al.* (2022)	India	Experimental Animal Study	Male Sprague Dawley rats with isoproterenol-	Hrudroga Chintamani Rasa (56.16 & 112.32 mg/kg)	Disease control	30 days	ECG, cardiac enzymes, AMPK, SIRT1,	Demonstrated significant cardioprotective, antioxidant, anti-

			induced myocardial infarction				oxidative stress, histopatholog y	inflammatory and histopathological improvements compared with disease control.
Menon *et al.* (2025)	India	Narrative Review	Literature on ASCVD and Ayurveda	Integrative analysis of Ayurvedic and biomedical concepts	Not applicable	Not applicable	Pathophysiol ogy and management concepts	Correlated ASCVD with Kaphaja Hridroga and Dhamani Pratichaya, emphasizing preventive and integrative Ayurvedic management.

A clinical study evaluating an Ayurveda-based diet combined with Panchakarma demonstrated improvement in coronary atherosclerosis and cardiovascular risk factors in patients with coronary artery disease.[16] Furthermore, an ongoing randomised double-blind clinical trial is investigating the efficacy of Pushkar Guggulu and Haritaki as adjunctive therapy in stable coronary artery disease, reflecting the increasing adoption of evidence-based research methodologies in Ayurveda.[17]

Additional evidence from randomised controlled trials and case reports suggests that Ayurvedic interventions may improve vascular function, symptom severity, exercise tolerance, and quality of life in selected cardiovascular conditions, including ventricular tachycardia, valvular heart disease, and post-myocardial infarction rehabilitation.[18-21]

Although these findings are encouraging, overall evidence quality remains limited by small sample sizes, heterogeneous interventions, and methodological limitations. Therefore, well-designed multicentre randomised controlled trials with standardised Panchakarma protocols are required before definitive recommendations can be made.

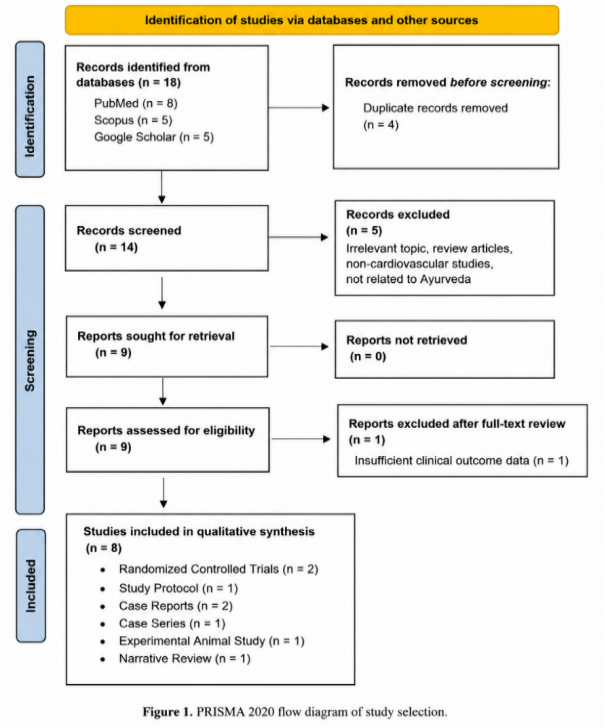

Figure 1. PRISMA 2020 flow diagram of study selection.

Ayurvedic Medicinal Plants and Classical Formulations in Hridroga

Herbal medicines and classical formulations constitute an integral component of Ayurvedic management of Hridroga. Selection of drugs is individualized according to Dosha predominance, stage of disease, associated comorbidities, and patient strength. Most Hridya Dravya possess cardioprotective, antioxidant, anti-inflammatory, hypolipidemic, and Rasayana properties, thereby supporting cardiac function and improving overall cardiovascular health.

***Terminalia arjuna* (Arjuna)**

Arjuna is the most extensively studied cardioprotective herb in Ayurveda. It is traditionally indicated in Hridroga because of its Hridya, Kashaya Rasa, and Kapha-Pitta Shamaka properties. Experimental and clinical studies have shown antioxidant, anti-ischemic, antihyperlipidemic, antihypertensive, and myocardial-protective effects. Arjuna has shown benefits as an adjunct in chronic stable angina, heart failure, and coronary artery disease.[22]

***Inula racemosa* (Pushkarmoola)**

Classical texts describe Pushkarmoola as an important Hridya drug. Modern studies suggest anti-anginal, antioxidant, vasodilatory, and cardioprotective activities. It has also been incorporated into recent randomised clinical trials evaluating Ayurvedic management of stable coronary artery disease.[23]

***Commiphora mukul* (Guggulu)**

Guggulu is widely used for disorders associated with Meda Dushti and dyslipidemia. Pharmacological studies report hypolipidemic, anti-inflammatory, and anti-atherosclerotic properties, supporting its use in reducing cardiovascular risk.[24]

Other Important Herbs

Several other medicinal plants, including *Boerhavia diffusa* (Punarnava), *Allium sativum* (Lasuna), *Withania somnifera* (Ashwagandha), *Tinospora cordifolia* (Guduchi), and *Emblica officinalis* (Amalaki), have demonstrated antioxidant, anti-inflammatory, immunomodulatory, and cardioprotective activities in experimental and clinical studies.

Classical Formulations

Classical formulations such as Arjunarishta, Prabhakara Vati, Hridayarnava Rasa, Pushkar Guggulu, Punarnava Mandura, and Dashamoola Kwatha are commonly prescribed according to Dosha predominance and disease stage. These formulations are intended to improve cardiac function, maintain circulatory homeostasis, alleviate symptoms, and support long-term cardiovascular health.

Overall, available evidence suggests that Ayurvedic medicinal plants and classical formulations may serve as valuable adjuncts in cardiovascular care. However, further well-designed multicentre clinical trials are required to establish standardised dosage regimens, long-term safety, and therapeutic efficacy.

Contemporary Scientific Evidence and Future Directions

Growing scientific interest has led to increasing evaluation of Ayurvedic interventions for cardiovascular diseases using modern research methodologies. Experimental studies have demonstrated antioxidant, anti-inflammatory, antihyperlipidemic, endothelial-

protective, and cardioprotective effects of several Ayurvedic medicinal plants and classical formulations. Clinical investigations further suggest that Ayurveda may improve symptom severity, functional capacity, quality of life, and selected cardiovascular risk factors when used as an adjunct to conventional therapy.[25-27]

Recent randomised controlled trials and prospective clinical studies have evaluated interventions such as Terminalia arjuna, Pushkar Guggulu, and comprehensive Ayurvedic treatment protocols in patients with stable coronary artery disease and cardiovascular risk factors, demonstrating encouraging improvements in exercise tolerance, vascular function, and metabolic parameters.[28-29] However, most studies are limited by relatively small sample sizes, heterogeneous interventions, inadequate blinding, and short follow-up periods.
Published case reports have also documented favourable outcomes following individualised Ayurvedic management in ventricular tachycardia, rheumatic valvular heart disease, and cardiac rehabilitation after myocardial infarction. Although these reports provide valuable clinical observations, they cannot establish definitive therapeutic efficacy and should be interpreted cautiously.[30-32]

Future research should focus on well-designed multicentre randomised controlled trials, standardised treatment protocols, validated cardiovascular outcome measures, pharmacovigilance, and long-term safety assessment. Integration of biomarker-based evaluation, systems biology, metabolomics, and precision medicine approaches may further strengthen the scientific validation of Ayurvedic cardiology and facilitate its integration into evidence-based cardiovascular care.[33-35]

CONCLUSION

Ayurveda describes Hridroga as a multifactorial disorder involving disturbances of Dosha, Agni, Dhatu, and Srotas. The Ayurvedic management of Hridroga is based on individualised principles, including Nidana Parivarjana, Deepana-Pachana, Shodhana, Shamana, Rasayana, and appropriate dietary and lifestyle modifications. Contemporary research suggests that selected Ayurvedic interventions possess cardioprotective, antioxidant, anti-inflammatory, and hypolipidemic properties, supporting their potential role as adjuncts to conventional cardiovascular care. However, robust clinical evidence is still limited. Future well-designed clinical trials and interdisciplinary research are required to validate Ayurvedic interventions and strengthen their role in integrative cardiology.

FUTURE PERSPECTIVES AND RESEARCH GAPS

Although Ayurveda offers a comprehensive and individualised approach to cardiovascular health, high-quality scientific evidence remains limited. Future research should prioritise multicentre randomised controlled trials with standardised treatment protocols, validated cardiovascular endpoints, and long-term follow-up to establish the efficacy and safety of Ayurvedic interventions. Standardising herbal formulations, ensuring quality, monitoring safety, and evaluating herb–drug interactions are essential for wider clinical acceptance.

Advances in molecular biology, metabolomics, systems biology, and artificial intelligence offer opportunities to investigate the mechanisms underlying Ayurvedic therapies and identify objective biomarkers of treatment response. Collaborative research involving Ayurvedic physicians, cardiologists, pharmacologists, and clinical researchers will help integrate Ayurveda into evidence-based cardiovascular care while preserving its classical principles.

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USE OF ARTIFICIAL INTELLIGENCE

During manuscript preparation, the authors used OpenAI's ChatGPT to assist with language editing, drafting preliminary text, and improving readability. All AI-generated content was critically reviewed, verified against the original literature, and substantially revised.

ABBREVIATIONS

CAD- Coronary Artery Disease
CVD- Cardiovascular Disease
ECG- Electrocardiography
RCT- Randomised Controlled Trial
WHO- World Health Organization
ESC- European Society of Cardiology
AHA- American Heart Association

REFERENCES

1. World Health Organization. Cardiovascular diseases (CVDs). Geneva: World Health Organization; 2025 [cited 2026 Aug 24]. Available from: https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds).
2. Roth GA, Mensah GA, Johnson CO, Addolorato G, Ammirati E, Baddour LM, *et al*. Global burden of cardiovascular diseases and risk factors, 1990–2019: update from the GBD 2019 study. J Am Coll Cardiol 2020;76(25):2982-3021.
3. Virani SS, Alonso A, Aparicio HJ, Benjamin EJ, Bittencourt MS, Callaway CW, *et al.* Heart disease and stroke statistics—2021 update: a report from the American Heart Association. Circulation 2021;143(8):e254-e743.
4. Agnivesha, Charaka, Dridhabala. Charaka Samhita. Edited by Shukla V, Tripathi RD. Chikitsa Sthana, Trimarmiya Chikitsa Adhyaya. Reprint ed. Varanasi: Chaukhamba Sanskrit Pratisthan; 2022. p.636-640.
5. Sushruta. Sushruta Samhita. Edited by Acharya YT. Sharira Sthana. Reprint ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2022. p.82-91.
6. Vagbhata. Ashtanga Hridaya. Edited by Paradakara HS. Sutra Sthana. Reprint ed. Varanasi: Chaukhamba Orientalia; 2022. p.22-31.
7. Menon M, Salethoor SN, Madathil T, Shukla A. Understanding atherosclerotic cardiovascular disease in the light of Ayurveda. J Ayurveda Integr Med 2025;16(5):101186.
8. Agnivesha, Charaka, Dridhabala. Charaka Samhita. Edited by Shukla V, Tripathi RD. Chikitsa Sthana, Trimarmiya Chikitsa Adhyaya. Reprint ed. Varanasi: Chaukhamba Sanskrit Pratisthan; 2022. p.636-640.
9. Sushruta. Sushruta Samhita. Edited by Ambikadatta Shastri. Sharira Sthana. Reprint ed. Varanasi: Chaukhamba Sanskrit Sansthan; 2022. p.81-92.
10. Vagbhata. Ashtanga Hridaya. Edited by Paradakara HS. Sutra Sthana. Reprint ed. Varanasi: Chaukhamba Orientalia; 2022. p.22-31.
11. Agnivesha, Charaka, Dridhabala. Charaka Samhita. Edited by Shukla V, Tripathi RD. Vol.2. Chikitsa Sthana. Hridroga Chikitsa Adhyaya. Reprint ed. Varanasi: Chaukhamba Sanskrit Pratisthan; 2022. p.636-640.
12. Vagbhata. Ashtanga Hridaya. Edited by Paradakara HS. Nidana Sthana. Hridroga Nidana Adhyaya. Reprint ed. Varanasi: Chaukhamba Orientalia; 2022. p.487-492.

13. Madhavakara. Madhava Nidana. Edited by Upadhyaya Y. Hridroga Nidana Adhyaya. Reprint ed. Varanasi: Chaukhamba Prakashan; 2022. p.384-388.
14. Menon M, Salethoor SN, Madathil T, Shukla A. Understanding atherosclerotic cardiovascular disease in the light of Ayurveda. J Ayurveda Integr Med 2025;16(5):101186.
15. Rajput A, Shamkuwar M, Jindal N, Nagpal R. Role of Virechana Karma as a cardioprotective modality: a narrative review. J Clin Diagn Res 2026;20(4):JE01-JE05.
16. Kaware R, Khan S. Role of Ayurveda-based diet and Panchakarma therapy on quantitative change in coronary atherosclerosis in known coronary artery disease assessed by quantitative CT coronary angiography. Asian J Cardiol Res 2023;6(1):125-131.
17. Sharma S, Gupta A, Rai AK, Gupta P, Gupta B, Sharma BS, *et al.* Efficacy of Ayurveda interventions (Pushkar Guggulu and Haritaki) as an adjunct to standard care in stable coronary artery disease: study protocol for a double-blind randomized controlled trial. BMC Complement Med Ther 2026;26:65.
18. Salerno JW, Xu S, Rainforth M, Nidich SI, Schneider RH. A randomized, double-blind, placebo-controlled trial of an Ayurvedic herbal formulation and vitamin C/E on vascular function in patients with cardiovascular disease. Medicina (Kaunas) 2026;62(5):972.
19. Mithra MP. Ayurvedic approach to treat Hridroga (valvular heart disease): a case report. J Ayurveda Integr Med 2020;11(1):78-81.
20. Kajaria D, Khobarkar PN. Managing monomorphic ventricular tachycardia without cardioversion: a case report. J Ayurveda Integr Med 2023;14(2):100654.
21. Rastogi S, Rastogi S, Mittal T. Cardiac rehabilitation through conventional care with add-on Ayurveda intervention following acute myocardial infarction: a case report. J Ayurveda Integr Med 2026;17(4):101353.
22. Dwivedi S. *Terminalia arjuna* Wight & Arn.: a useful drug for cardiovascular disorders. J Ethnopharmacol 2007;114(2): 114-129.
23. Ulbricht C, Basch E, Szapary P, Hammerness P, Axentsev S, Boon H, *et al*. Guggul for hyperlipidemia: a review of the evidence. Complement Ther Med 2005;13(4):279-290.
24. Singh RB, Niaz MA, Ghosh S, Beegom R, Rastogi SS, Rastogi V, *et al*. Scientific basis of Indian herbal medicines as adjunctive therapy in cardiovascular diseases. Cardiovasc Drugs Ther 1994;8(4):635-640.
25. Dwivedi S. *Terminalia arjuna* Wight & Arn.: a useful drug for cardiovascular disorders. J Ethnopharmacol 2007;114(2): 114-129.
26. Dwivedi S, Chopra D. Revisiting *Terminalia arjuna*—an ancient cardiovascular drug. J Tradit Complement Med 2014;4(4):224-231.
27. Pingali U, Fatima N, Muralidhar N, *et al*. Evaluation of an Ayurvedic herbal formulation on vascular endothelial function in subjects with cardiovascular risk factors: a randomized placebo-controlled trial. Medicina (Kaunas) 2022;58:1324.
28. Sharma S, Gupta A, Rai AK, Gupta P, Gupta B, Sharma BS, *et al*. Efficacy of Ayurveda interventions (Pushkar Guggulu and Haritaki) as an adjunct to standard care in stable coronary artery disease: study protocol for a double-blind randomized controlled trial. BMC Complement Med Ther 2026;26:65.
29. Deshmukh S, Choudhary K, Ahmad A, Rao BCS, Srikanth N, Acharya R. Effectiveness and safety of Ayurvedic interventions in essential hypertension: a systematic review and meta-analysis. Front Pharmacol 2025;16:1695614.
30. Kajaria D, Khobarkar PN. Managing monomorphic ventricular tachycardia without cardioversion: a case report. J Ayurveda Integr Med 2023;14(2):100654.
31. Mithra MP. Ayurvedic management of rheumatic valvular heart disease: a case report. J Ayurveda Integr Med 2020;11(1):78-81.
32. Rastogi S, Rastogi S, Mittal T. Cardiac rehabilitation through conventional care with add-on Ayurveda intervention following acute myocardial infarction: a case report. J Ayurveda Integr Med 2026;17(4):101353.
33. Roth GA, Mensah GA, Johnson CO, Addolorato G, Ammirati E, Baddour LM, *et al*. Global burden of cardiovascular diseases and risk factors, 1990–2019: update from the GBD 2019 study. J Am Coll Cardiol 2020;76(25):2982-3021.
34. Virani SS, Alonso A, Aparicio HJ, Benjamin EJ, Bittencourt MS, Callaway CW, *et al*. Heart disease and stroke statistics—2021 update: a report from the American Heart Association. Circulation 2021;143(8):e254-e743.
35. Knuuti J, Wijns W, Saraste A, Capodanno D, Barbato E, Funck-Brentano C, *et al.* 2019 ESC guidelines for the diagnosis and management of chronic coronary syndromes. Eur Heart J 2020;41(3):407-477.

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