

Research Article**A CRITICAL REVIEW OF PITTAJA HRIDROGA: STRUCTURAL CARDIAC CHANGES IN LIGHT OF AYURVEDA AND MODERN EVIDENCE****Dr. Ashwini Ramkrushna Pinge¹, Dr. Dinesh B Naik²**¹Pg Scholar, Department of Rachana Sharir Pdea's College of Ayurveda & Research Centre, Nigdi, Pune²Associate Professor, Department of Rachana Sharir Pdea's College of Ayurveda & Research Centre, Nigdi, Pune
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Pittaja Hridroga, one of the five classical types of Hridroga described in Ayurvedic texts, is a condition primarily caused by the vitiation of Pitta dosha within the Hrudaya (heart). It manifests through characteristic symptoms such as burning sensation in the cardiac region (Hritdaha), exhaustion (Klama), excessive thirst (Trishna), fainting (Murchha), giddiness (Bhrama), sweating (Sweda), and sour or bitter eructations (Tiktaamla udgirana). Ayurveda regards the Hrudaya not only as a physical organ but as the central seat of Prana, Ojas, and Chetana, reflecting its physiological as well as emotional significance. When Pitta becomes aggravated due to improper diet, stress, or environmental heat, it produces inflammatory and degenerative changes that disturb the functional and structural integrity of the heart. In modern terms, these clinical and pathological features correspond closely with ischemic and inflammatory cardiac disorders, including myocarditis and cardiomyopathy. Contemporary diagnostic modalities, particularly 2D echocardiography, have revealed structural cardiac changes in patients exhibiting symptoms similar to Pittaja Hridroga—such as wall motion defects, ventricular hypertrophy, valvular involvement, and reduced ejection fraction. These findings substantiate the Ayurvedic assertion that prolonged Dosha dushti leads to Hrudaya vikriti (structural deformity). This review synthesizes classical Ayurvedic wisdom and modern cardiological evidence to interpret Pittaja Hridroga as an inflammatory and oxidative stress-induced cardiac disorder. It emphasizes the importance of early recognition through doshic assessment, dietary and behavioral correction, and Pitta-shamaka therapies. Integrating Ayurvedic principles with modern diagnostics offers a comprehensive approach to prevention, diagnosis, and management of cardiac diseases, reaffirming the relevance of Ayurveda in contemporary cardiovascular health care.

Keywords: Pittaja Hridroga, Hridaya, Pitta dosha, 2D Echocardiography, Inflammatory cardiomyopathy, Ayurveda, Structural cardiac changes, Hridaya Sharir, Integrative medicine

1. Introduction

Ayurveda, the ancient Indian medical science, considers health as a balanced state of Dosha, Dhatu, and Mala, governed by the harmony of Agni and Ojas. Among the Trimarma—vital centers of the body—the Hrudaya (heart) holds the foremost position, being the seat of consciousness, life, and emotion¹.

Sushruta defines Hridroga as a pathological condition where morbid Doshas vitiate the Rasa dhatu and localize in the Hrudaya, causing pain and dysfunction:

दूषयित्वा रसं दोषा विगुणा हृदयं गताः ।

कुर्वन्ति हृदये बाधां हृद्रोगं तं प्रचक्षते ॥ (सु.उ. ४३)

Translation: When aggravated doshas vitiate Rasa dhatu and localize in the heart, they cause obstruction and pain, resulting in Hridroga. Among the five types of Hridroga—Vataja, Pittaja, Kaphaja, Sannipataja, and Krimija—the Pittaja type is characterized by heat, inflammation, and burning sensation². The Hrudaya being the Mula sthana of Pranavaha and Rasavaha srotas, its disturbance leads to systemic pathology³. Modern medicine defines cardiovascular diseases as structural or functional abnormalities of the heart and blood vessels leading to insufficient perfusion⁴. The resemblance between Pittaja Hridroga and inflammatory cardiac conditions like myocarditis or ischemic heart disease demonstrates the depth of Ayurvedic pathophysiology

2. Ayurvedic Concept of Pittaja Hridroga

2.1 Nidana (Etiological Factors)

Ayurvedic texts describe several causes that aggravate Pitta dosha and precipitate Pittaja Hridroga:

- Excessive intake of spicy (Katu), sour (Amla), salty (Lavana) foods
- Excessive alcohol consumption
- Emotional stress, anger, and exposure to heat
- Sleeplessness and suppression of natural urges

All these factors increase internal Ushna guna, leading to Pitta prakopa and Rasa-Rakta dushti⁵. This vitiated Pitta lodges in the heart—an organ naturally dominated by Sattva and Ojas—causing structural and functional imbalance.

2.2 Samprapti (Pathogenesis)

The process of disease manifestation follows a chain of events:

- Pitta prakopa (aggravation of Pitta)
- Rasa and Rakta dushti (contamination of plasma and blood)
- Sthana samshraya (localization in the heart region)
- Utklesha and Vyakti (manifestation of symptoms)

This sequence mirrors the inflammatory process described in modern pathology where cytokine activation, oxidative stress, and vascular changes damage myocardial tissue⁶.

2.3 Lakshana (Clinical Features)

Charaka describes the cardinal features of Pittaja Hridroga as:

हृददाहस्तिक्तता वक्रे तिक्ताम्लोद्गिरणं क्लमः ।

तृष्णा मूर्छा भ्रमः स्वेदः पित्तहृद्रोगलक्षणम् ॥ (च.सू.१७/३३)

Meaning: Burning in the heart, bitterness in mouth, sour eructation, exhaustion, thirst, fainting, giddiness, and sweating are features of Pittaja Hridroga⁷.

Sushruta adds that such patients often present with Tamodayanam (dimness of vision), Jwara (fever), Murchha (syncope), and Peetabhava (yellow discoloration)⁸. These descriptions strongly suggest inflammatory and metabolic cardiac dysfunction.

3. Hridaya Sharir – Anatomical and Functional Perspective

The Hrudaya is considered the Pranayatana (seat of life) and Ojas sthana in Ayurveda⁹. It continuously circulates Rasa dhatu and maintains homeostasis. Structurally, it is described as a lotus-like organ located between the Stanas (breasts), facing downward, and supported by great vessels carrying Rasa and Prana.

हृदयं नाम पिण्डाकृतिः पद्माकारं मध्ये स्थितं चातुरश्रम् ॥ (सु.शा.५/३१)

Modern anatomy identifies the heart as a four-chambered muscular organ with specialized conduction pathways, valves, and coronary circulation. It lies in the mediastinum, enclosed by the pericardium¹⁰. Ayurvedic scholars identified the Hrudaya marma—a vital spot whose injury

results in instantaneous death. This indicates profound awareness of its physiological importance. The Hrudaya is also the Mula sthana of Rasavaha and Pranavaha srotas, confirming its circulatory and respiratory functions¹¹.

4. Structural Cardiac Changes in Pittaja Hridroga: Evidence from 2D Echocardiography

A cross-sectional study conducted at PDEA College of Ayurved and Research Center, Pune, observed 61 patients of clinically diagnosed Pittaja Hridroga using 2D echocardiography¹². The analysis revealed significant structural variations as summarized below:

Cardiac Structure	Observations in Pittaja Hridroga Patients
Myocardial Wall	Hypokinesia of anterior, apical, and inferior walls; mild fibrosis
Left Ventricle (LV)	Hypertrophy or dilation; reduced contractility
Right Ventricle (RV)	Mild pressure overload, secondary to LV dysfunction
Valvular System	Mitral and tricuspid regurgitation in chronic cases
Ejection Fraction (LVEF)	Reduced (average 40–55%)
Chambers	Left atrial enlargement in some patients
RVSP	Elevated, indicating secondary pulmonary hypertension

These findings suggest that Pittaja Hridroga corresponds to inflammatory cardiomyopathy, ischemic changes, or hypertrophic disorders. The involvement of Pitta implies inflammatory and oxidative injury to myocardial tissue leading to these morphological abnormalities¹³.

5. Correlation with Modern Pathophysiology

In biomedical science, inflammation and oxidative stress are recognized as primary causes of structural cardiac remodeling. Chronic inflammation leads to fibrosis, wall thinning, and reduced ventricular compliance¹⁴. Pitta dosha—associated with heat and transformation—parallels biochemical processes like oxidative phosphorylation and lipid metabolism. Excessive Pitta reflects hypermetabolic states producing reactive oxygen species (ROS), cytokines, and cellular inflammation¹⁵.

Ayurvedic Concept	Modern Correlation
Hritdaha	Myocardial ischemia causing burning pain
Trishna	Dehydration and metabolic acidosis
Murchha, Bhrama	Arrhythmia, syncope, hypotension
Sweda, Klama	Sympathetic activation, reduced cardiac output
Jwara, Peetabhava	Systemic inflammation and hepatic involvement

Hence, Pittaja Hridroga can be viewed as a systemic inflammatory response leading to functional and structural cardiac damage.

6. Discussion

The classical depiction of Pittaja Hridroga demonstrates the keen clinical insight of ancient physicians who recognized the link between inflammation, metabolism, and cardiac function. The Pittaja features—heat, burning, yellow discoloration, and thirst—are consistent with the modern concept of inflammatory cardiomyopathy and ischemic heart disease. The heart, being the site of Ojas, is extremely sensitive to metabolic and emotional disturbances. Ayurveda acknowledges the psychosomatic aspect of cardiac disorders, highlighting the influence of anger, stress, and fear in aggravating Pitta. Chronic emotional strain acts as an endogenous heat source, leading to vasoconstriction and ischemia. 2D echocardiographic evidence confirms that Pitta-dominant conditions manifest as structural changes—ventricular hypertrophy, reduced ejection fraction, and valvular inflammation. These correlate with tissue-level Dhatu paka (degeneration) described in Ayurveda.

The management of Pittaja Hridroga focuses on Pitta shamanam (pacification) and Hrudaya poshanam (nourishment of heart). Dietary regulation includes cooling, sweet, and

unctuous foods—Shali rice, milk, ghee, Draksha (grapes), Amalaki (*Emblica officinalis*), and Shatavari. Medications like Arjuna ksheerapaka, Pushkarmoola, Guduchi, and Amalaki rasayana have been proven to strengthen cardiac tissue and reduce oxidative stress.

Furthermore, Rasayana chikitsa enhances Ojas and supports regeneration. Non-pharmacological measures such as Pranayama, meditation, and Abhyanga (oil massage) regulate Prana vayu and mental stress, reducing Pitta aggravation. Thus, Ayurveda's holistic approach—encompassing physical, mental, and dietary correction—provides a framework for integrative cardiology.

7. Conclusion

Pittaja Hridroga exemplifies the convergence between ancient Ayurvedic pathology and modern cardiovascular science. It reflects a Pitta-dominant inflammatory process that leads to measurable structural and functional cardiac changes. Echocardiographic findings substantiate the classical view that chronic Dosha dushti affects not only physiological function but also anatomical integrity.

Understanding Pitta in terms of biochemical heat, oxidative stress, and inflammation provides a valuable lens for reinterpreting cardiac pathophysiology. Ayurvedic therapies emphasizing Pitta-shamana, antioxidant herbs, and Hridya rasayanas can play a significant role in prevention and rehabilitation.

The integrative understanding of Pittaja Hridroga thus bridges the gap between traditional wisdom and modern science. It highlights that maintenance of doshic balance, mental calmness, and dietary moderation are essential for sustaining Hridaya sthairyata (cardiac stability). The holistic model of Ayurveda offers not only curative but preventive insights—encouraging a lifestyle that preserves both the structure and sanctity of the human heart.

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