



A DIAGNOSTIC STUDY ON KAPHAJA HRIDROGA (MYOCARDIAL INFARCTION): AN INTEGRATIVE CLINICAL APPROACH

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ABSTRACT:

Cardiovascular diseases (CVDs) are the leading cause of mortality worldwide accounting for approximately 32% of all deaths. As per World Health Organization the burden of non-communicable diseases is rising, with CVDs responsible for 27% of total deaths in India. *Ayurveda* describes heart disease under the umbrella of *Hridroga*, with *Kaphaja Hridroga* sharing symptomatic similarities with myocardial infarction (MI) with the significance of *Hridaya* (heart) emphasized in *Ayurveda* as a vital component of health. Classified as a life-threatening *Sadyah Pranahara Marma*, conditions like *Hridroga* require early diagnosis. The Ayurvedic concept of *Dhamani Praticchaya*, involving the accumulation of *Kapha* and *Meda* in the vascular channels, parallels the pathogenesis of atherosclerosis and thrombosis, which can lead to development of Ischemic Heart Disease influenced by a variety of factors including dietary (*Aharaja*), lifestyle (*Viharaja*) and mental (*Manasika*) aspects. Accurate diagnosis relies on analyzing symptom triggers, patient descriptions, clinical findings, and investigations like ECG are essential for diagnosing rhythm disturbances and acute STEMI, if undiagnosed ends up in fatal outcomes.

KEYWORDS: *Kaphaja Hridroga*, Myocardial Infarction, ECG, Coronary Artery Disease

INTRODUCTION

Cardiovascular diseases (CVDs) remain the leading cause of death globally, accounting for approximately 32% of all deaths, with the World Health Organization¹ estimating that around 19.8 million individuals succumbed to CVDs in 2022 alone. This statistics emphasizes the urgency for effective prevention and treatment strategies, especially in countries like India, where non-communicable diseases contribute to 63% of total deaths, with a staggering 27% of these fatalities attributed to CVDs².

Myocardial infarction (MI), commonly known as a "Heart Attack," is a critical manifestation of heart disease resulting from a significant reduction or stoppage of blood flow to sections of the myocardium, primarily due to underlying coronary artery disease. A major underlying condition atherosclerosis, involves the buildup of plaques within coronary arteries, leading to myocardial cell death, ischemia, and subsequent necrosis.³

The significance of *Hridaya* (heart) has been vividly highlighted in Ayurveda texts, where it is recognized as one of the *Trimarma*, described as *Pranayatana*, *Chetanasthana*, and *Pradhana Marma*⁴ within the body. Being categorized as a *Sadyah Pranahara Marma*, any injury-whether external or internal leading to *Hridroga* is a life-threatening condition, making early diagnosis very important. The concept of *Dhamani Praticchaya*⁵ is listed among the 20 *Kaphaja Nanatmaja vikaras*⁶, where the morbid accumulation of *Kapha* and *Meda* in

Rasa Rakta Marga is termed *Shonitabhishyanda*⁷ which can be interpreted as the pathology of atherosclerosis leading to thrombosis⁸.

Overall, this could be a catastrophic event leading to hemodynamic deterioration and sudden death⁹. Family history of CAD is a predisposing factor for such clot formation, one that cannot be changed. There is no “gene for heart attacks,” but we do have genes for the enzymes involved in cholesterol metabolism.

Other predisposing factors for atherosclerosis include cigarette smoking, diabetes mellitus, and high blood pressure. Any one of these may cause damage to the lining of coronary arteries, which is the first step in the abnormal deposition of cholesterol. A diet high in cholesterol and saturated fats and high blood levels of these lipids will increase the rate of cholesterol deposition. The etiological factors contributing to ischemic heart disease (IHD) are manifold, involving *Aharaja* (dietary), *Viharaja* (lifestyle), and *Manasika* (psychological) influences. The *Rasa* and *Rakta dhatu* serve as fluid media known for their *Preenana* and *Jeevana* functions.

However, these functions can be hampered by *margavarana*, leading to *Hridi baadha*, a term used to describe various forms of discomfort or pain experienced in the precordial region. Prompt recognition of heart disease is often hindered by two primary factors. First, many forms of coronary heart disease can remain asymptomatic for extended durations, allowing progression to advanced stages before patients experience symptoms. Second, the nonspecific nature of symptoms associated with heart disease means that diverse conditions may manifest similarly, making it challenging to pinpoint the exact diagnosis.

Making the correct diagnosis depends on careful analysis of the factors that provoke symptoms, the subtle differences in how they are described by the patient, clinical evaluations and investigation results¹⁰. When patients seek medical attention for prolonged ischemic discomfort, the initial diagnosis typically centers around acute coronary syndrome (ACS)¹¹. The diagnosis integrates various clinical findings, electrocardiogram¹² (ECG) results, and serum cardiac biomarkers, with the ECG serving as a cornerstone tool in both outpatient and inpatient settings serving as the gold standard for diagnosing rhythm and conduction disturbances.

The 12-lead electrocardiogram is pivotal for diagnostic accuracy, enabling differentiation between unstable angina, non ST segment elevation myocardial infarction (NSTEMI), and ST segment elevation myocardial infarction (STEMI), significantly influencing management strategies.

A critical and classic sign of an acute STEMI caused by an injury current resulting from severe, transmural (full-thickness) ischemia of the heart muscle. Injured heart cells create electrochemical disturbance with healthy cells which manifests as an amplified current flow results in the characteristic ST elevation. The etiology, symptoms, and pathogenesis of *Hridroga* are detailed in classical Ayurvedic texts.

Furthermore, diagnosis relies on observing *Laxanas* through *Roga Rogi Pariksha* with a focus on *Kaphaja Hridroga*^{13,14} *pratyatma laxanas* mentioned like *Hridaya Suptata*, *Stimita*, *Guruta*, *Asmavrutha Bharikam*, *Tandra*, *Stabdata* validate the ancient descriptions of *Kaphaja Hridroga* and in parlance with the general symptomatology (nature of pain) of Angina in Myocardial Infarction like characteristic chest pain-often, described by patient as heavy weight on (Pressure), squeezing (Constricting), and crushing (compressing) in retrosternal (chest) region, dyspnea and demonstrate remarkable overlap with modern clinical cardiology.

The integration of modern diagnostic tools, such as ECG, can enhance the diagnostic framework, providing additional validation for traditional Ayurvedic approaches. Considering the rising incidence of Coronary Artery Diseases, early diagnosis is crucial in preventing fatal outcomes. Therefore, this study aims to understand *Kaphaja Hridroga* (Myocardial Infarction) and diagnose it based on classical references and related modern literature. The E.C.G. of those patients was studied, and a possible correlation of *Kaphaja Hridroga* with specific ECG pattern was attempted.

OBJECTIVES:

1. To assess the signs and symptoms of *Kaphaja Hridroga*/ Myocardial infarction.
2. To evaluate ECG findings in patients presenting with *Kaphaja Hridroga* symptoms.

MATERIALS AND METHODS

It's an clinical observational study of 30 patients presented with the symptoms of *Kaphaja Hridroga* / Acute Myocardial Infarction were assessed with the specially designed case pro-forma which includes history taking, physical signs and symptoms mentioned in *Ayurveda* and Allied sciences.

The recording of cases were done based on the clinical features and diagnosis was supported by E.C.G, further ECG changes were interpreted.

Inclusion Criteria

- Adults aged 30–70 years
- Patients presenting with classical symptoms of *Kaphaja Hridroga* and diagnosed with MI based on clinical and ECG findings.

Exclusion Criteria

- Patients of Congenital Heart Disease
- Pregnant women
- Patients suffering from other systemic disorders (Cerebrovascular Diseases, Peripheral artery diseases, Deep Vein Thrombosis)
- Non cardiac conditions of chest pain

Assessment Criteria¹⁵

Subjective Parameters: Clinical features of *Hridroga*/MI mentioned in the *Ayurveda* and Modern Texts

<i>Kaphaja Hridroga</i>	ACS-Myocardial Infarction
<i>Hrit shula</i>	Chest pain or discomfort
<i>Hridaya – suptata</i>	Numbness or dullness in cardiac region
<i>Hridaya – stimita</i>	Stiffness/tightness in cardiac region
<i>Hridaya Bharika</i>	Heaviness in cardiac region
<i>Hridaya Ashmavritha</i>	Feeling of as if pressed by stone in cardiac region
<i>Murcha/Pramoha</i>	Feeling of impending doom/syncope
<i>Tandra</i>	Torpor/drowsy - a state of mental/physical inactivity
<i>Alasya</i>	Generalised weakness/unusual fatigue/restlessness
<i>Swasa</i>	Shortness of breath/Dyspnoea
<i>Chardi</i>	Nausea/Vomiting
<i>Jvara</i>	Fever
<i>Aruchi</i>	Anorexia
<i>Asya-madhurya</i>	Sweet taste in mouth

Objective Parameters:

Investigations – ECG

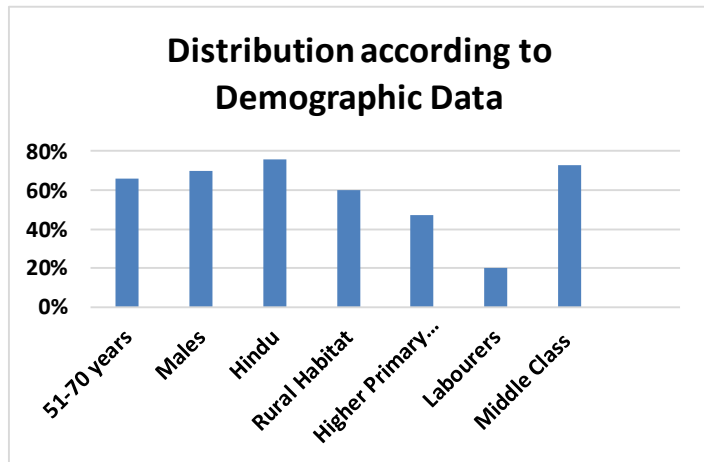
STEMI: If ST segment is above baseline 1mm in limb leads & 2mm nearly in chest leads .

NSTEMI: If the ST segment is below the base line with T wave inversion.

OBSERVATION AND RESULTS: -

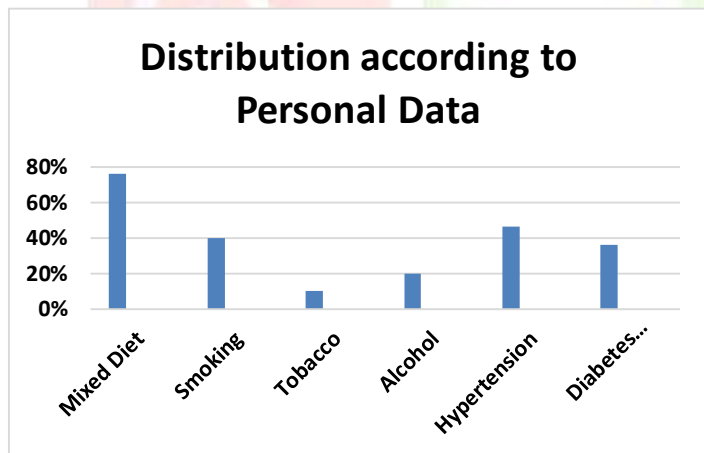
On Demographic data

Majority of the patients, 66% were belong to age group of 51-70 years .70% were males. 76% were Hindu, 23% were businessman and 20% were Labourers, 73% were belong to middle-class family.



On Personal data

Among 30 patients, most of the patients 76% had a mixed diet , Habit-wise 40% had habit of smoking, 10% of patients habituated to tobacco chewing daily, 20% of them used to alcohol. 46% of patients suffering from Hypertension and 36% Diabetes Mellitus as co-morbidities.



On Data related to Disease

On Hridroga Laxana

The universal presence of *Hrit Shula* (100%) and other symptoms such as *Ashmavrita* (56%), *Bharika* (53%), *Swasa* (63%), *Aruchi*(10%), *Chardi*(50%), *Alasya*(50%), *Murcha* (36%) correlates and strongly overlap with angina equivalents noted in modern cardiology confirms its diagnostic importance in *Kaphaja Hridroga*. *Alasya*, *Tandra*, *Aruchi* indicate *Kapha* dominance, while *Murcha*, *Chardi*, Cold sweating show acute ischemic events and autonomic imbalance. Majority of patients i.e., 64% presented with Grade 4 CCS angina classification.

ON DIAGNOSTIC STUDY

ECG Impression

Among 30 patients selected for the study 83% had ST segment elevation, 46% showed Hyperacute T wave followed by peaked T wave of 36%. Heart wall affected .ie., Antero-septal with 30%, Anterolateral of 20% and 26% with Inferior wall. And the coronary artery occluded was Left Anterior Descending artery .ie. 63%.

DISCUSSION

Hridaya is one of the *Trimarmas*, any injury whether external or internal, can lead to *Hridroga*, a life-threatening condition, making early diagnosis crucial. Acharyas emphasize the importance of diagnosis by examining the *Lakshanas* through *Roga Rogi pariksha*. *Aharaja Viharaja : guru snigdha achesta nidra etc.*, vitiates *Kapha Dosha* which cause *shonithabhishyanda*.

In the contemporary context, sedentary lifestyles, Smoking, alcohol, tobacco and high sugar, fat diets significantly contribute to the rising prevalence of dyslipidaemia. They, in turn, elevate LDL and total cholesterol levels while reducing HDL in the blood and these factors are known precursors or concurrent developments with atherosclerosis. *Manasika Hetu* : Stress is a major contributor to cardiovascular disease (CVD).

The concept of *Margavarana* (Thrombosis) describes an obstruction in the blood vessels caused by the accumulation of *Kapha* and *Medhas* in the *Rasa Raktha Marga*, usually termed as *Dhamani Praticaya* leading to a series of pathological changes such as *Shonithabhishyanda* (Dyslipidemia), *Dhamani Upalepa* (Atherosclerosis), *DhamaniPushtatha* - thickening of the blood vessels (vascular remodeling), *VistharaBhava* (calcification deposit), and the formation of *SirajaGranthi* (atherosclerotic plaque).

On Demographic data

Majority of the patients, 66% were belong to age group of 51-70 years emphasizing the increased vulnerability of middle-aged to elderly individuals towards Coronary artery diseases¹⁶. 70% were males which aligns with epidemiological data suggesting men are at higher risk compared to women and Females are said to be protected from cardiac disease before menopause due to the high level of estrogen hormone. 76% were Hindu However, there was no observed predilection for IHD according to religion. This distribution likely reflects the broader demographic composition of the community surrounding the study location. 23% were businessman and 20% were Labourers suggesting both sedentary lifestyle and physical/psychological stress as risk factors. 73% were belong to middle-class family, reflecting that lifestyle, occupational stress, and dietary variations significantly contribute to the pathogenesis.

On Personal data

Among 30 patients, maximum of 76% patients were consuming regular mixed diet. A diet high in sugar, saturated fats, trans fats, and cholesterol can raise cholesterol levels which is a predisposing factor for Atherosclerosis¹⁷. This type of diet is rich in *snigdha, madhura guna, katu, amla, lavana rasa* and is *guru* for digestion vitiates *kapha dosha* which is a predisposing factor for *dhamani praticaya* which in turn leads to *Hridroga*. Habit-wise 40% had habit of smoking, 10% of patients habituated to tobacco chewing daily, 13% of them used to smoke which are known cardiovascular risk factors. The comorbidities revealed Hypertension (46%) and Diabetes Mellitus (36%) as major predisposing factors, DM increases the chance of atherosclerosis whereas HTN increases the chance of vascular constriction and increases cardiac load, while dyslipidemia also contributed to the metabolic dysfunction thereby pathology of atherosclerosis and ischemic disease occurs.

On Data related to Disease

On Hridroga Laxana

In Samhitas, there is mentioning of different characters of pain caused by Doshaja types of *Hridroga*. *Vataja Hridroga* presents with *Toda*, *Shoola*, *Bheda* type of pain; *Daha*, *Chosha* etc can be seen in *Pittaja Hridroga* and patient feels as if loaded with a stone (*Ashmaavrita*) in *Kaphaja Hridroga*.

Clinically, *Hritshula* (chest pain) was found in all patients, establishing it as the cardinal symptom of the disease and Associated symptoms such as *Ashmavrita* (56%), *Bharika* (53%), *Swasa* (63%), *Aruchi* (10%), *Chardi* (50%), *Alasya* (50%), *Murcha* (36%) were highly consistent with the symptomatic spectrum of myocardial infarction. *Alasya*, *Tandra*, *Aruchi* indicate *Kapha* dominance, while *Murcha*, *Chardi*, Cold sweating show acute ischemic events and autonomic imbalance.

Majority of patients (64%) belonged to Grade 4 according to CCS angina classification, reflecting advanced disease presentation and late reporting, typical in Indian clinical contexts.

Hritshula – *Samanya lakshana* of *Hridroga*, due to *Vata dosha* vitiation along with *avarodha* of *Rasa* and *Rakta Dhatu* by *Kapha* and *Meda* in the *Hridaya ends in Margavarana* leads to deprivation of rasadi nutrients to *Hridaya* and manifests as *shula*. **Chest pain**¹⁸ in acute MI due to reduced blood supply to the heart muscle through coronary arteries due to atherosclerotic narrowing leads to ischemia of cardiac muscle which release acidic substances or cellular proteolytic enzymes which stimulate the sensory nerve endings, pain impulses are conducted through nerve fibers causes angina pectoris. Radiating Pain: cardiac nerve fibers travel through the sympathetic trunk to the upper thoracic spinal cord referring pain to areas like the chest, arm, neck, and jaw.

Characteristics of chest pain

Ashmavruta bharika – *vedana* is specific character of pain due to *kapha dosha pradhanyata* which means feeling of heaviness manifests because of *avarodha* in the *Hridaya* by *Kapha* and *meda*. **Heaviness**¹⁹ in the chest region, due to ischemic injury to heart muscle cells leading to metabolic changes and chemical mediators activating cardiac sensory nerves, combined with mechanical stress on the heart walls, resulting in the brain perceiving this as a characteristic pressure or heaviness in the chest often adjectives used by the patients to describe intensity of pain. This symptom is a critical clinical hallmark of myocardial infarction.

Hridaya Suptata/Stimta – Due to *margavarana* of *vata* by *kapha* and *medas* in the *Rasavaha srotas* leading to deprivation of Rasadi i.e nutrients to proximal part of occlusion which results in feeling of *Stambha* in *Hridaya pradesha*. Blood perfusion is insufficient to meet the myocardial demand, so myocardial cells become ischemic. To sustain themselves, with an energy deficiency they must uncouple their electrical activation from mechanical contraction and remain in their resting state. This state where Ischemic myocardium become stiff and less contractile is termed - myocardial stunning during acute, sudden-onset ischemia and patient feels like **numbness/stiffness**²⁰.

Swasa : *Shwasa Avarodha* indicating involvement of *Pranavaha Srotas*. Among the different types of shwasa *UrdhwaShwasa* is common sequelae caused by *Pratiloma gati* of *Vata* and *Avarodha* of *Prana* and *Udana Vata*. Severe Dyspnoea and Accumulation of mucus in the mouth is leading manifestation of *urdhwa shwasa* which parallels the explanation of frothy sputum of Pulmonary edema. **Exertional Dyspnoea**. As it is a common manifestation in CAD the heart's pumping ability is compromised leading to left ventricular failure, so reduction in pumping ability of the heart which in turn causes pulmonary oedema leads to **Dyspnoea (Shortness of breath)**²¹.

Murcha/Pramoha : *Mada Moorcha Sanyasa* are the progressive stage of loss of consciousness manifested due to Untreated *shonita dushti*/Hypertension. Doshas vitiated obstruct the *Rasavaha*, *Raktavaha* and *Sanjna vaha Srotas* leading to *Murcha*. About 46% of patients in my study are of Hypertensive, that could be the reason for presentation of Syncope. **Neurocardiogenic Syncope** is a transient loss of consciousness that occurs when cardiac output is not sufficient to maintain the cerebral blood flow leads to fainting.

Diaphoresis: *sweda* due to *margavarana janya* and *shonitadusti*. Sympathetic Nervous System Activation - Pain and Anxiety Response body releases catecholamines (like adrenaline), a fight-or-flight response which stimulate sweat glands leading to cold sweating.

Tandra/Alasya - Due to *kapha dosha pradhanyata* and *Rakta, Rasa*, *Sanjnyavaha srotodusti*. A state of mental/physical inactivity, generalised weakness due to reduced blood flow to muscles and brain the heart struggles to pump efficiently, leading to poor oxygen delivery, which causes persistent **tiredness/unusual fatigue**.

Aruchi, Chardi : involvement of *Rasavaha Srotas* in the *Samprapti* of *Hridroga* and *Upalepa* of *Hridaya* by the *Dushta Kapha* and *Rasa* there is manifestation of *Aruchi*. Vagal Nerve Stimulation- Inferior wall MIs often irritate the vagus nerve, which connects the heart to the brain and gut. Autonomic Nervous System Activation -The stress of cardiac ischemia activates the sympathetic nervous system, releasing catecholamines that affect the brain's chemoreceptor trigger zone, this stimulation can trigger **nausea and vomiting**.

On Diagnostic study

ECG Findings

HEART RATE: Among 30 patients of *Kaphaja Hridroga*, maximum of 36% of patients had tachycardia with a heart rate between 91->100 and 42% patients had normal heart rate between 60 80 beats/ min. Tachycardia may be due to the sudden cardiac stress and increased myocardial oxygen demand activation of the sympathetic nervous system (SNS), which modulates cardiac function during acute MI. Whereas the normal heart rate is due to the minimal damage to heart muscles or recovery of the cardiac stress.

RHYTHM: In this study 94% of patients ECG showed normal sinus rhythm. Because the common causes for arrhythmias are congenital heart defects which was excluded from the study, valvular heart disease (Rheumatic heart disease) which was excluded due to systemic involvement, Drug abuse as such no particular history was found and digitalis toxicity which was not found in history or observations.

P WAVE: In this study most of the patients ECG showed a normal P wave complex and regular rhythm, confirming sinus involvement at presentation. most of the ventricular pathologies in the form of different Myocardial Infarction, Ventricular hypertrophy, Bundle branch blocks etc. but P wave represents the atrial events

ST SEGMENT: In this study, a maximum of 83% ECGs showed ST segment Elevation, 14% showed ST segment depression and 3% showed Isoelectric ST segment. The concave downward ST elevation, which often dominates the T wave, produces a characteristic tombstone appearance is the earliest recognised sign in the ECG confirming the diagnostic hallmark²² of acute ST-Elevation Myocardial Infarction (STEMI). A critical and classic sign of an acute STEMI caused by an injury current resulting from severe, transmural (full-thickness) ischemia of the heart muscle. Injured heart cells create electrochemical disturbance with healthy cells which manifests as a amplified current flow results in the characteristic ST elevation.

T WAVE: Among 30 patients of *Kaphaja Hridroga*, maximum of 46% ECG showed Hyperacute T wave, 36% and 13% ECG showed Peaked and inversion respectively signifying acute ischemic injury.

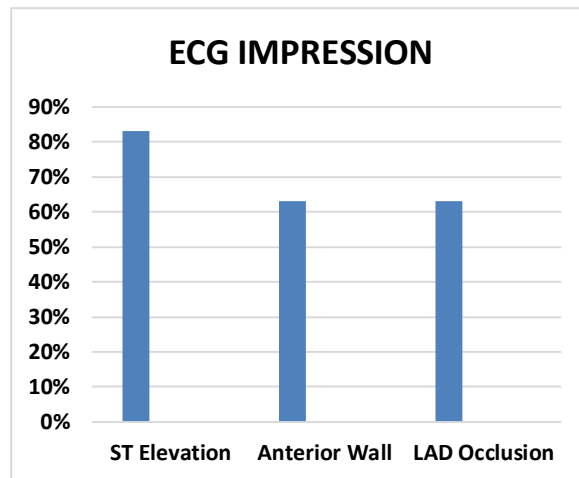
LOCALIZATION OF MYOCARDIAL INFARCTION :

HEART WALL AFFECTED:

The specific ECG leads that show ST elevation help to pinpoint which part of the heart is affected by the MI. In this study, the most common site was Antero-septal (30%), anterolateral (20%) followed by Inferior (26%) wall damaged, respectively, aligning with epidemiological studies of STEMI distribution where Anterior Wall Myocardial Infarction (63%) is prevalent. The LV is typically divided into septal, anterior, lateral, and inferior quadrants. ST segment elevation observed in the anterior leads (V1-V6) and, depending on the severity of the infarction, occasionally in the septal and lateral leads, is indicative of an anterior ST-segment elevation myocardial infarction. Erosion or rupture of the atherosclerotic plaque in LAD²³ leads to thrombus formation. Erosion of the plaque exposes thrombogenic lipid core or subendothelial tissue, leading to enhanced vascular inflammatory activity and thrombus formation. A thrombus and vasospasm can reduce blood supply to the myocardium, leading to ischemia and subsequent myocardial infarction.

CORONARY ARTERY OCCLUDED:

Among 30 patients of *kaphaja Hridroga*, the culprit coronary artery occluded based on ECG findings, maximum of 63% had LAD aligning with other epidemiological studies of STEMI distribution, 26% had RCA and 10% had LCx/RCA. The LAD artery was the most commonly involved vessel, consistent with global data that LAD occlusions is the most frequent cause of MI.



DISCUSSION ON SADHYASADHYATA –

The literatures does not address individual types. But in *Hridroga*, primary and major *Rogamarga* afflicted will be *Madhyama* and it is categorized as *Sadyah Pranahara Marma*. Therefore, any type of *Hridroga* by nature is difficult to cure. Prognosis - The Biggest Coronary Artery i.e Left Main artery (LAD - 63%) (LCx) supplies oxygen rich blood to the significant portion of the heart muscle, particularly the front and main wall. Due to its high risk of fatality, LAD²⁴ is often referred as a “widowmaker” - A occlusion in this artery is crucial and can have serious consequences, include Cardiogenic shock, Left ventricular dysfunction, Ventricular septal rupture and Sudden cardiac death.

Importance of ECG

Medicine is an ever changing science. As new research and clinical experience broaden our knowledge, changes in investigations, treatment and drug therapy are required. Even though many novel and sophisticated instruments have been discovered in the last 100 years, physical examinations and ECG remain the most important diagnostic procedures for the general practitioner in rural, remote areas pivotal in the diagnosis of various cardiac diseases. As of today, the two important uses of ECG are the diagnosis of acute myocardial infarction and the recognition of all types of cardiac arrhythmias. Limitations of ECG are lack of standardization, Inaccuracy in interpretation, technical errors and Physician Expertise. Most of the times it is said as “Recognizing the limits of normality is one of the main difficulties of E.C.G interpretation” because a normal ECG will not rule out all the pathologies and even a healthy individual might have an abnormal ECG without any pathology. Ultimately, the diagnostic yield of an ECG often depends on the Physician’s expertise, and their ability to interpret with in a clinical context.

CONCLUSION

- Cardiovascular diseases (CVD) encompass disorders of the heart and blood vessels, with myocardial infarction (MI) being a severe manifestation caused by reduced or complete cessation of blood flow to the myocardium, often due to coronary artery disease. Atherosclerosis is the primary mechanism, leading to plaque formation, cellular death, and ischemia, which can result in serious consequences.
- Hridroga* pertains to diseases of the *Hridaya*, reflecting structural and functional deformities that result in *Hrid-badha*. This term encompasses different types of *Ruja* and *Kriyatmaka vikruti*. As *Hridaya* is a life-threatening *Sadyah Pranahara Marma*, early diagnosis of conditions like *Hridroga* is crucial.

- The major risk factors for ischemic heart disease (IHD) identified were hypertension and diabetes mellitus, along with sedentary lifestyles, smoking, alcohol, tobacco use, and diets high in sugar and fat, all of which are known precursors to atherosclerosis.
- These risk factors align with Ayurvedic principles, particularly the concept of *Margavarana* (thrombosis) and the accumulation of *Kapha* and *Medha* in the *Raktha Marga*, leading to *Dhamani Prathichyaya* influenced by dietary (*Aharaja*) and lifestyle (*Viharaaja*) choices.
- Clinically, majority of patients presented with classical laxanas of *Hridroga* i.e., *Hritshula* (chest pain), establishing it as the cardinal symptom of the disease and associated symptoms like *Shwasa*, radiating pain, stony hard feeling on chest (*Ashmavruta*, heaviness (*Bharika*), vomiting (*Chardi*) were highly consistent with the symptomatic spectrum of myocardial infarction and are quite in accordance with the description of nature of pain seen in Angina due to Myocardial Infarction available in texts of modern medicine and remarkably overlaps the symptomatology.
- Notably, majority of the analysed ECGs showed ST segment Elevation indicative of acute ST-Elevation Myocardial Infarction (STEMI) primarily affecting the Anterior wall and due to its high risk of fatality where LAD involvement being the most frequent that demonstrates the prognosis of patients with anterior MI is worse than those with inferior or posterior MI reflecting advanced disease presentation and late reporting, typical in Indian clinical contexts.

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