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# AN OBSERVATIONAL STUDY TO EVALUATE DOSHAJ HRIDROGA WITH RELATION TO ECG AND 2D ECHO

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**Abstract**
Context: *Hridaya* is an essential organ that keeps the various parts of the body together. *Hridroga* is a manifestation of Baadha to *Hridaya*. *Hridroga* is classified into five path gnomic symptoms. The most prevalent illnesses affecting the circulatory system, which includes the heart and its vasculature, are cardiovascular disorders.
The concepts of *Darshana, Sparshana, and Prashna Pariksha* are still relevant in modern clinical procedures including gathering medical histories, doing general examinations, and systematic examinations. Acquiring precise understanding about *Roga* and *Rogavastha* in *Hridroga* is facilitated by *Trividha Pariksha*. The current generation of diagnostic tools, including invasive, non-invasive, biochemical, and haematological procedures, helps to identify cardiovascular problems at an early stage. When treating a cardiac patient, the diagnostic method helps to increase treatment efficacy and prevent long-term problems. Goals and objectives: To assess the relation of *Hridroga* with ECG and 2D echo from a clinical standpoint. Supplies and Procedures: 50 subjects in all who met the diagnostic criteria were enrolled, and their *Nidanas* underwent in-depth historical and physical examinations on specially created proforma with their ECG and 2D echo. Results: 2D echo report and ECG alterations were used to analyse the types of *hridroga* with *dosha dominance*.

Keywords: *Hridroga*, Cardiovascular diseases, ECG, 2D ECHO.

## INTRODUCTION:

Due to the vitiation of *Rasadhatu*, *Hridroga* is a disorder that produces discomfort in the heart[1]. Globally, cardiovascular disease is the primary cause of death for non-communicable diseases. Our society's incidence of cardiovascular disorders is rising alarmingly as a result of the complete shift in food and lifestyle brought about by assimilating into western culture and modern civilization. *Ayurvedic* literature have specified a variety of diagnostic approaches, and the foundation for both correct diagnosis and treatment is provided by *Trividha Pariksha*, which includes *darshan, sparshan*, and *Prashna Pariksha*.

The remaining diagnostic techniques described in *Ayurveda* and contemporary science can be grouped under these *Trividha Pariksha* by taking into account the following: taking a history or questionnaire (*Prashna*), inspecting *(Darshana),* palpating and percussion *(Sparshana*), and taking a palpation (*Sparshana*). A patient's cardiovascular illness is mostly evaluated by taking a complete medical history, doing a physical examination, ordering a chest radiograph, ordering an EKG, and ordering laboratory and biochemical tests. Moreover, other tests such as cardiac catheterization, treadmill testing, angiograms, echocardiograms, etc. These tests might be categorized as invasive, non-invasive, hematopathological, or biochemical. Even said, there are occasions when these sophisticated tests are quite important in pinpointing the precise diagnosis of a cardiac patient[2]. This article aims to clarify the significance of diagnostic methods like ECG, 2D ECHO for the identification of cardiovascular illness and the adoption of more effective treatment options.

## AIMS AND OBJECTIVES:

To evaluate *Doshaja Hridroga* based with the help of ECG, 2D Echo.

## STUDY DESIGN:

An Observational Study

## METHODOLOGY:

50 patients who passed the screening process and met the diagnostic requirements were chosen. Along with the examination and ECG, a thorough history was recorded, and 2D ECHO reports were obtained. A newly created questionnaire was used to analyse *Lakshanas*[3]. This facilitates the evaluation of the function of dosha dominance in *Hridroga*[4] manifestation with changes in 2D echo and ECG.

## INCLUSION CRITERIA:

- Diagnosed cases of heart diseases like Angina and Myocardial infarction, Heart failure, Rheumatic heart disease, Cardiomyopathy, Congenital heart disease,

Valvular heart disease, Carditis, Aortic aneurysms etc. Patients with symptoms of *Hridroga.*

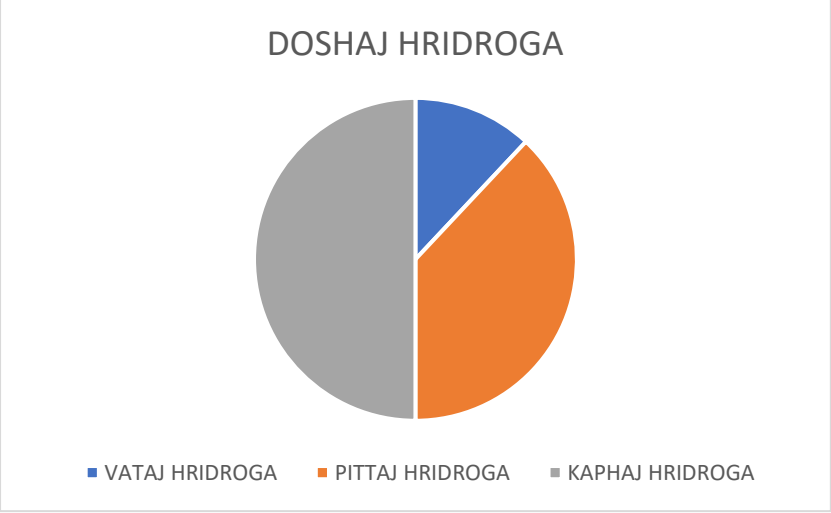
- Patients diagnosed with post covid cardiac disorder.
- Age- 18 – 55 years
- Gender - either gender

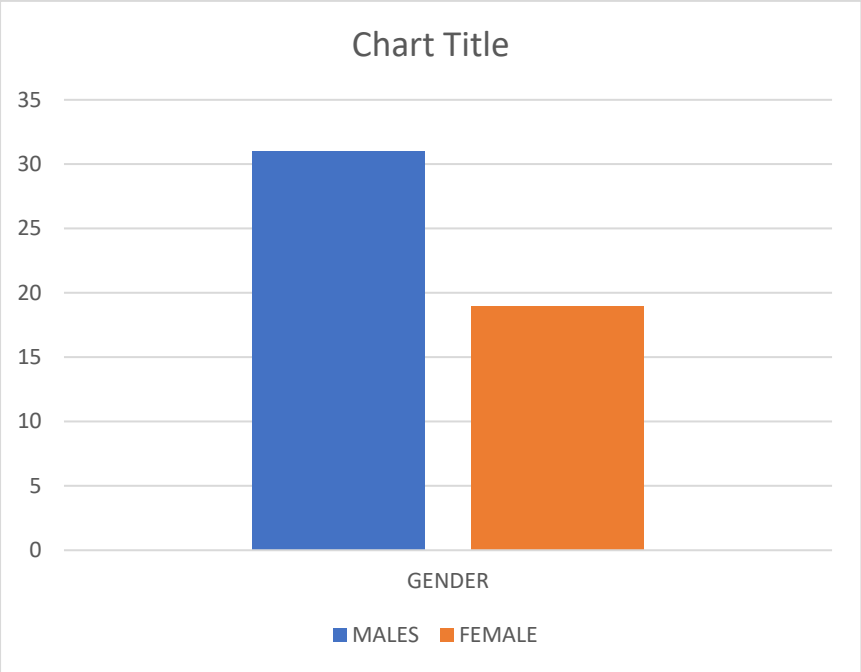
EXCLUSION CRITERIA:

- Patients diagnosed with symptoms of *Krimaj Hridroga.*
- Patient having major ailments of other systems. E.g. CA of any organs, Hepatitis B&C, Pregnancy, TB etc. at the time of enrolling the patients.

OBSERVATION:

A maximum of 35–70 years old were included in the current study; 31 (62%), all male, and middle class; 32 (68.1%) of the individuals had h/o DM, HTN, or CVD; and 8 (17%) had relevant family history. Six of the fifty participants were *Vataja Hridroga*, 19 were *Pittaja Hridroga*, and the remaining 25 were *Kaphaj Hridroga*. Ativyayama, *Shoka, Chinta* (stress), and consuming spicy, greasy, high-calorie foods were found to be the frequency of *Nidana* consumption.






DISCUSSION:

The *Lakshana* among the six *Vataja Hridroga*[5] individuals included tearing, stabbing, cutting, palpitating, erratic heartbeat, and *shwasa* with weakness and exhaustion. Among *Pittaja Hridroga*[6] 19 individuals, the *lakshanas* with aching and burning discomfort were *Trishna*, *Ushnata, Daha, Klama,* and *Sweda. Gouravam, Stambha, Alasya,* and *Kasa* were among the 25 subjects of *Kaphaj Hridroga*[7] who had *lakshanas*, or fullness or heaviness[8], in the chest area.

*Vataj Hridroga* showed short R-R interval, long R wave in lead 2, T wave elevation in V2 and V3, and ST segment elevation in V5 and V6 in the ECG and 2D ECHO alterations. The 2D ECHO reports that were examined revealed the following: a dilated inferior vena cava, mild and basal inferior, akinetic posterior and lateral wall with thickness, moderate tricuspid regurgitation, and a left ventricle ejection fraction ranging from 30 to 45%.

In *Pittaja Hridroga*, the alterations in the ECG and 2D Echo were as follows: short R wave in avF and Lead 3, short QRS in V5 and V6, ST segment depression in V5 and V6, and ST segment elevation in Lead-2 and 3. Inferoposterior wall akinetic with thickness, left ventricular systolic function between 30 and 35%, right ventricle systolic pressure between 35 and 41 mm of Hg, and LAD Territory hypokinetic with thickness are all displayed in the 2D Echo.

The ECG and 2D ECHO findings in *Kaphaj Hridroga* were: high R wave in V3, V4, V5, V6, ST segment elevation in V3, V4, long R-R interval, and T wave depression in V6. Short QRS complex was found in Lead 2, avF, and avL. The 2D Echo reveals sclerosed aortic valve, dilated right auricle and right ventricle, left ventricle ejection fraction between 40 – 45 % and right

ventricle systolic pressure up to 75 mm of Hg. Left Ventricle Hypertrophy is present in the anterior, mid, and inferio-posterior walls with thickness.

## CONCLUSION:

While many people with cardiovascular disease may not exhibit any symptoms either at rest or during physical activity, they may exhibit certain abnormal physical findings, such as raised blood pressure, heart murmurs etc. Early cardiovascular disease detection may be the difference between life and death. A thorough diagnosis can be made using the patient's medical history and clinical examination. Clinical examinations should be reinforced with ECGs and 2D Echo cardiography. Traditional diagnostic instruments such as *Prashna, sparshana,* and *Darshana Pariksha*[9] are still useful because a clinical examination is still the primary means of diagnosing a wide range of heart conditions. Early diagnosis is crucial because cardiovascular illnesses continue to be the leading cause of morbidity and mortality.

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