

Article

# A prospective study of clinical profile of coronary artery disease in females

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**Abstract:** Coronary artery disease (CAD) is a significant health concern among females, and understanding its modes of presentation and clinical profile is crucial for effective management. This prospective cross-sectional study was conducted at the Department of General Medicine, Sri Venkateshwaraa Medical College Hospital and Research Centre, Ariyur, Puducherry, from May 2022 to April 2023. The study aimed to explore the various modes of presentation and clinical characteristics of CAD in females. The inclusion criteria consisted of female patients above 40 years with hypertension, diabetes mellitus, and dyslipidemia, while patients with congenital heart disease, rheumatic heart disease, structural heart disease, or electrical abnormalities were excluded. A total of 100 female patients presenting with symptoms, signs, and electrocardiogram (ECG) changes suggestive of CAD, along with elevated biochemical markers, were included as cases. The results revealed that 33% of the patients belonged to the age group of 60-70 years. Age was found to be a significant risk factor for CAD mortality among women, with increasing age correlating with a higher incidence of hypertension, diabetes, obesity, and dyslipidemia. The most common mode of presentation was chest pain, highlighting the importance of recognizing this symptom in the evaluation of CAD in females. Furthermore, systemic hypertension and diabetes mellitus were identified as additional risk factors for myocardial infarction (MI) in this population. In conclusion, this study underscores the need for early recognition and understanding of the various modes of presentation and clinical characteristics of CAD in females. Chest pain, along with systemic hypertension and diabetes mellitus, emerged as important factors to consider in the evaluation and management of CAD in this population.

**Keywords:** Coronary artery disease; Females; Systemic hypertension; Diabetes mellitus; Obesity.

## 1. Introduction

Coronary heart disease has been defined as “impairment of heart function due to inadequate blood flow to the heart compared to its needs, caused by obstructive changes in the coronary circulation to the heart” [1–10].

Women with coronary artery disease present differently than men, have different pathophysiologies and risks profiles and are often significantly older and thus often have poorer outcomes.

### 1.1. Aim of Study

1. This study is to find the various modes of presentation and clinical profile of coronary artery disease in females.
2. To study the associated risk factors, there is an urgent need to recognize all these conditions so as to reduce the burden associated with it in terms of increased morbidity and mortality.

## 2. Material and methods

### 2.1. Place of the Study

This Prospective cross sectional study was conducted at Department of General Medicine, Srivenkateshwaraa medical college hospital and research centre, Ariyur, Puducherry during May 2022 to April 2023.

## 2.2. Methodology

- Hundred female patients admitted with symptoms and signs and ECG changes suggestive of CAD with Biochemical markers taken as cases.

## 2.3. Inclusion Criteria

1. Patients above 40 years.
2. Hypertension.
3. Diabetes mellitus.
4. Dyslipidemia.

## 2.4. Exclusion Criteria

1. Congenital Heart disease.
2. Rheumatic Heart disease.
3. Structural Heart disease.
4. Electrical abnormalities

## 3. Results

### 3.1. Clinical Symptoms

- Chest pain is the most common presenting symptom.
- 88% (88 out of the 100 patients) presented with chest pains.

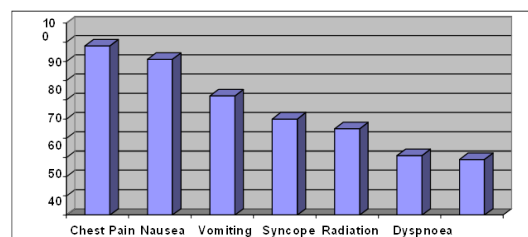


Figure 1. Clinical Symptoms

### Other common Symptoms

- Chest pain – 88
- Nausea – 81
- Vomiting – 62
- Syncope – 50
- Radiation – 45
- Dyspnoea – 31
- Other ( Palpitation, epigastric pain) – 29%

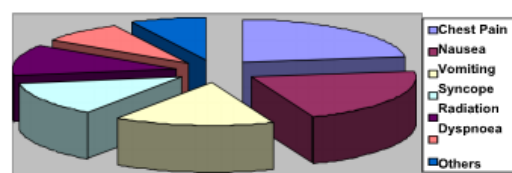


Figure 2. Clinical Symptoms

### 3.2. Clinical signs

- Lung basal Crepitation is the most common presentation of clinical sign.

Table 1

Signs	No of Cases (Total = 100 patients)
JVP	23
S3	16
S4	24
Crepitations	45
Wheeze	8
Hypotension	10

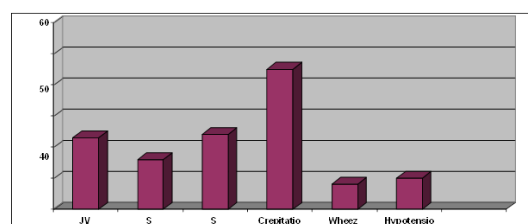


Figure 3. Clinical Signs

### Signs

- JVP – 23%
- S3 – 16%
- S4 – 24%
- Crepitation – 45%
- Wheeze – 8%
- Hypotension – 16%

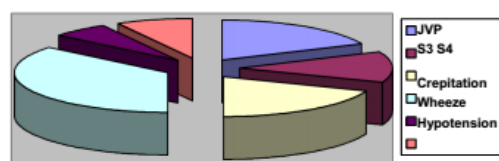


Figure 4. Clinical Signs

## 4. Discussion

Coronary artery diseases are major causes of mortality and disease in the Indian subcontinent with more than 25% deaths. It has been predicted that these diseases will increase rapidly in India and this country will be host to more than half the cases of heart diseases in the world within the next 15 yrs. In our study 33% were among age group between 60-70 yrs. Coronary artery disease mortality among women gradually increases with age and increase in the risk of coronary artery disease is related to a higher incidence of hypertension, diabetes, obesity and dyslipidemia.

## 5. Conclusion

The following are the conclusions that could be inferred from this study on clinical spectrum and risk factors for CAD among female patients:

1. The most common presentation is chest pain.
2. Second most common symptoms is nausea vomiting Syncope.

3. The most common cardiovascular sign is Lung Basal Crepitations.
4. Increase the risk of Myocardial Infarction in female population with dyslipidemia, Diabetes Mellitus ,Hypertension and Sedentary habits with high BMI.

**Conflicts of Interest:** The author declares no conflict of interests.

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