



## CLINICAL PROFILE OF CASES WITH ISCHEMIC HEART DISEASES IN WOMEN

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### ABSTRACT

The study was undertaken to identify the clinical profile of ischemic heart disease in women who are recently diagnosed, to identify the influence of well defined risk factors of ischemic heart diseases in women with ischemic heart diseases and to identify if there are any risk factors specific to women with ischemic heart diseases. The present study was descriptive study. The participants were 100 women admitted at our hospital with signs and symptoms suggestive of ischemic heart diseases. After obtaining a detailed history and clinical examination the patients were subjected to relevant investigations. The complete data was collected and subjected to statistical analysis. The major findings are maximum incidence of ischemic heart disease occurred in the age group of 51-60 years, 82 patients presented with acute MI, 13 patients with unstable angina and 5 patients with stable angina, most of which were observed in post menopausal women. From the above findings, it can be concluded that chest pain was the most common symptom of presentation and left ventricular failure was the most common complication. We recommend further detailed multi centre study with higher sample size in this area to generalize the results.

**Key words:** Ischemic heart diseases, Hypertension, Acute MI, Unstable angina.

### INTRODUCTION

Coronary artery disease (CAD) is the most common form of cardiovascular disease. CAD leads to angina and myocardial infarctions. In CAD, atherosclerosis damages the coronary artery wall forms the thrombus. The symptoms of acute coronary syndromes vary depending on the degree to which the thrombi formation of the coronary arteries. Ischemic heart disease is a disease characterized by reduced blood supply to the heart. The major risk factors of Ischemic heart disease are smoking, diabetes mellitus and cholesterol levels. The coronary heart disease can be diagnosed by medical and family histories, risk factors, a physical exam, and the results from tests and procedures.<sup>1,10,11</sup>

CAD in women continues to be a major public health problem with almost half a million deaths per year. Most women are unaware that coronary artery disease kills more women than the next seven causes of death combined. Since 1984, it has claimed lives of more women than men in the United States annually and the gap continues to grow.<sup>2</sup>

The present study was undertaken to observe the clinical profile of ischemic heart disease in women who are recently diagnosed and to identify the influence of well defined risk factors of ischemic diseases in women with ischemic heart diseases.

### MATERIALS AND METHODS

The present descriptive study was conducted at Little Flower hospital and research centre after obtaining permission from institutional human ethical committee (LFRMR/EC/3). After obtaining free, voluntary, written informed consent, 100 female patients admitted with ischemic heart disease in ICU and outpatient department of LF Hospital, Angamaly, were recruited by

convenient sampling method. The following criteria was used to recruit the participants

**Inclusion criteria:** Patients with a history of chest pain suggestive of ischemic heart disease who were recently diagnosed.

**Exclusion criteria:** Patients with valvular heart diseases, cardiomyopathy and those on digitalis medication.

### Methods

Socio demographic data include general and routine test investigation of the patients and diagnosis and history of the patient was collected from medical records department.

### Data analysis

Data was analyzed by SPSS 20.0. Values are presented in frequencies and percentage.

### RESULTS

Results are presented in figure no 1 to 3 and table no 1 to 5. Maximum incidence of ischemic heart disease occurred in the age group of 51-60 years followed by in the age group of 41-50 years. Hypertension, Hyperlipidemia, Diabetes mellitus and Obesity were the most common risk factors in the present study. Chest pain was the most common symptom at the time of presentation. 63% patients had sweating and 27% patients had breathlessness. Analysis of history, serial ECG and cardiac enzymes showed that there were 5 patients had chronic stable angina, 13 patients had unstable angina and 82 patients had acute myocardial infarction. 52% of patients were admitted within 12 hours and 62% were admitted within 24 hours of onset of symptom. AAMI was more common than IWMI. Right ventricular MI is commonly associated with inferior wall

MI, LVF was the most common complication of ischemic heart disease. Highest mortality following ischemic heart disease was seen patients with LVF followed by those with tachyarrhythmia.

Maximum number of deaths occurs in 6<sup>th</sup> and 8<sup>th</sup> decade. Maximum number of deaths occurred in AWMI.

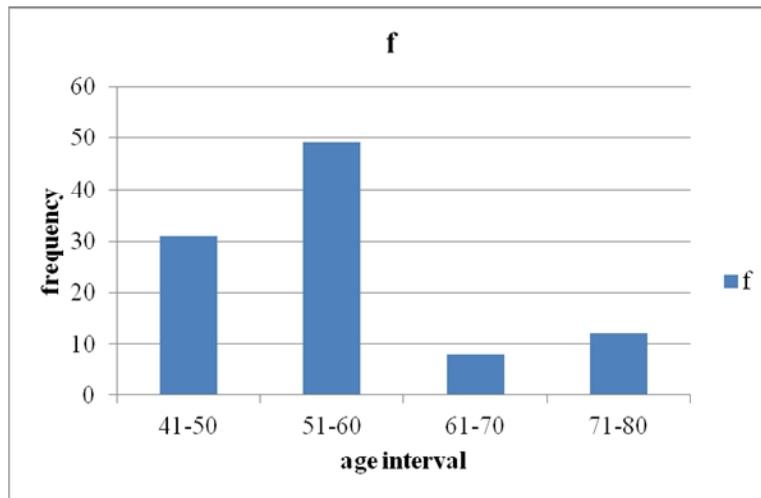


Figure 1: Frequency distribution of patients based on their age groups. (n=100)

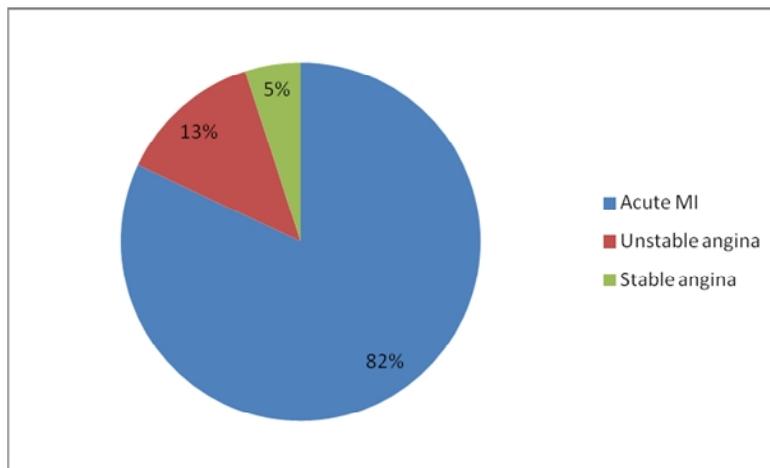


Figure 2: Percentage distribution of patients based on their type of coronary artery disease

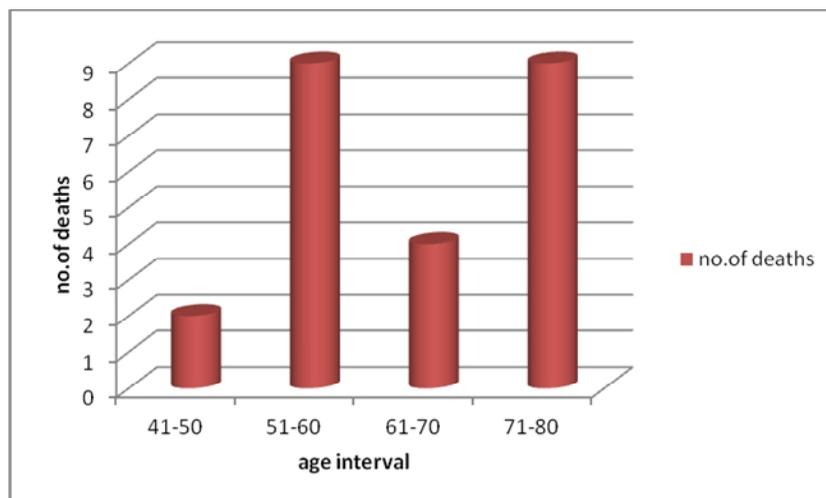


Figure 3: Relationship between mortality and age group of patients.

**Table 1: Frequency distribution and percentage of patients based on the symptoms at the time of presentation. (n=100)**

Symptoms	Frequency	Percentage
Chest pain	81	81
Sweating	63	63
Breathlessness	27	27
Nausea	12	12
Palpitation	15	15

**Table 2: Frequency distribution and percentage of patients based on the time interval between onset of symptoms and hospitalization. (n=100)**

Symptoms	Frequency	Percentage
<6	22	22
7-12	30	30
13-24	10	10
>24	38	38

**Table 3: Frequency distribution and percentage of patients based on site of infarction**

Site of MI	Frequency	Percentage
<b>Anterior wall</b>		
Anterior	18	18
Antero-septal	25	25
Extensive anterior	14	14
<b>Inferior wall</b>		
Inferior wall	12	12
Inferior wall+ right ventricular	5	5
Infero-lateral	3	3
Anterior wall and inferior wall	5	5
No MI	18	18

**Table 4: Frequency distribution and percentage of patients based on the incidence of complication**

Complications	Frequency	Percentage
LVF	27	27
Cardiogenic shock	16	16
Tachyarrhythmia	13	13

**Table 5: Mortality in relation to complications**

Complications	Frequency	No. of deaths	Percentage
LVF	27	12	50
Cardiogenic shock	16	3	12.5
Tachyarrhythmia	13	4	16.6

**DISCUSSION**

Coronary artery disease is a condition in which fatty deposits accumulate in the cells lining the wall of the coronary arteries. This process is called atherosclerosis which leads to narrowing of the blood vessels supplying blood to the heart muscle. These results in ischemia to the heart muscle and this can cause damage to the heart muscle. Complete occlusion of the blood vessel leads to a heart attack. In the present study it was noted that the incidence of IHD varied from minimum age of 41 years to maximum age of 80 years. Maximum cases were found in 51- 60 years. V Parameshwara et.al<sup>3</sup> observed increased incidence of ischemic heart disease among women in the 5<sup>th</sup> and 6<sup>th</sup> decade. Kannel et.al<sup>4</sup> has found a sharp increase in IHD among men during the 5<sup>th</sup> and 6<sup>th</sup> decade of life and women lag approximately 10 years behind. Incidence of IHD increased in both men and women with each decade of advancing age within each age group. However, gender related differences diminished with advancing age. In the present study of women with IHD 24 patients are menstruating and 76 patients had attained menopause. Gordon et.al<sup>5</sup> compared pre and post menopausal women of same age group participating in the Framingham study. A two fold increase in IHD incidence among post menopausal women was observed. Rosenberg et.al<sup>6</sup> found increasing risk of IHD as the age of menopause decreases. An increased risk of IHD has been observed among women who undergo premature menopause. In the present study 81 patients complained of chest pain. Sweating was the next common symptom. This was seen in 63 patients. Breathlessness was seen in 27 patients. Palpitation was seen in 15 patients and nausea in 12 patients. Presenting symptoms usually include chest pain with typical radiation. In the present study 33 patients had diabetes mellitus. Kannel reported that diabetes increased the risk of coronary artery disease three fold in women placing them in similar risk to men of same age. The present study is comparable with the study of Vaccarino et.al<sup>7</sup> done with respect to females and comparable with study Meher et.al<sup>8</sup> with respect to males. In the present study 46 patients with IHD had hypertension.

It is a major independent risk factor for the development of IHD and subsequent mortality. A systolic pressure of 160 mmHg or greater, a diastolic pressure of 85 mmHg or greater have been shown to increase the risk of IHD two to three fold in both men and women. In a study, 22 of the 47 women with MI had the history of arterial hypertension. In the present study we found 25 patients having obesity. Parameshwara et.al, in their study on IHD patients found 20% of women having obesity. In the present study only one patient give history of taking oral contraceptive pills. Rosenberg et.al<sup>6</sup> utilizing data obtained from Nurses’ health study investigated the relationship of OCP use to risk of hospitalization for acute MI. In the present study there were 23 deaths during acute phase. Two large studies<sup>4</sup> have shown that women with IHD had poor prognosis after acute MI than men. In that study, the 30 days mortality rate following acute MI was significantly higher in women than in men. Framingham heart study also suggests that diabetic women are of increased risk of death from a coronary event. The other complications are comparable to earlier studies.<sup>9</sup>

**CONCLUSION**

From the above findings, it can be concluded that chest pain was the most common symptom of presentation and left ventricular failure was the most common complication. We recommend further detailed multi centre study with higher sample size in this area to generalize the results.

**LIMITATIONS**

The major limitation in the study was lower sample size. Study was conducted at only one centre so it is difficult to generalize the results. We have recruited only female patients.

## RECOMMENDATIONS

We recommend further detailed study with higher sample size including both males and females from multiple centers for better outcome and to generalize the results.

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