



CLINICAL PROFILE OF ISCHAEMIC HEART DISEASE IN WOMEN OF NORTH INDIA.

Dr Nazar Hussain

Consultant Physician, District Hospital Poonch, J&K.

ABSTRACT

Introduction: Ischaemic heart disease (IHD) is one of the leading cause of death in women especially in the developing countries, placing an additional economic burden in the resource limited conditions.

There are limited studies on the subject from our country and thus the need for more data and research on clinical profile of IHD in women.

Objective: We conducted this study with an aim to study the clinical profile of ischaemic heart disease in women.

Result: We had a total of seventy-three female patients diagnosed as IHD during the study period with a mean age of 57.3 years. The age ranged between 43 years-77 years. Most of the patients in our series reported after 6 hours of onset of symptoms and less than ten percent reported within the first 6 hours. None of the patient in our cohort had positive alcohol or tobacco use history. A total of 63 patients constituting 86.3% were diagnosed as STEMI and the remaining cases were NSTEMI based on the ECG findings.

Conclusion: The incidence of IHD in our series was highest in 50-59-year age group and the most common risk factor for IHD was hypertension followed by diabetes mellitus, obesity, dyslipidaemia and a positive family history of cardiac disease. There was a significant delay between the onset of symptoms and reporting to the hospital in our series, leading to loss of precious time. There is a need to for awareness campaigns and improving the transport/ambulance services in rural areas for timely management.

KEYWORDS : IHD, Ischaemic Heart Disease, STEMI

Introduction

Ischaemic heart disease (IHD) is one of the leading cause of death in women especially in the developing countries, placing an additional economic burden in the resource limited conditions. It remains to be a major public health problem with nearly half a million deaths per year attributed to Coronary Artery Disease in women. In a recent study it was reported that IHD causes 8.6 million deaths among women annually, constituting almost a third of all deaths in women globally¹. The onset of clinical findings of coronary artery disease in women lags behind men by almost a decade. Women have an improved risk factor profile at a younger age than older age. Mortality among women due to coronary artery disease gradually increases with age and by the age of 80 years it is nearly equal to male counterparts². The postmenopausal rise in the risk of CAD is linked to a higher incidence of hypertension, obesity, diabetes and dyslipidaemias. The diagnosis of ischaemic heart disease in women is more difficult compared to men owing to more atypical symptoms like back pain, shortness of breath, nausea, fatigue or a burning sensation in chest³. Women tend to differ in their presenting complaints, treatment and overall prognosis. Initially there was limited research on women specific IHD research but over the years it has gained momentum⁴. Women's Ischemia Syndrome Evaluation Study (WISE), and many other recent studies have provided insights concerning sex differences in IHD⁵. There are limited studies on the subject from our country and thus the need for more data and research on clinical profile of IHD in women^{3,6-9}. We conducted this study with an aim to study the clinical profile of ischaemic heart disease in women.

Material & Methods

This study was conducted in Department of Medicine in a District Level Hospital, which caters to the whole district with no private hospital in the area. All the female patients with signs and symptoms suggestive of IHD & diagnosed as cases of IHD were enrolled in the study between February 2015 and June 2017.

A thorough clinical examination and history including details of presenting complaints, age, smoking, alcohol consumption, level of physical activity, reproductive history, socioeconomic status, body mass index and diet was

recorded in a pre-set proforma. History of co-morbid conditions or risk factors for IHD like hypertension, diabetes, dyslipidaemia, obesity and family history of IHD was noted. An electrocardiogram (ECG) was obtained to evaluate the site of infarct, when necessary a biochemical marker test was also done. The patient's weight, height, blood pressure and pulse were noted at the examination and BMI calculated. The data was analysed and categorical data was presented as numbers and percentages, statistical tests wherever necessary were used appropriately.

Results

We had a total of seventy-three female patients diagnosed as IHD during the study period with a mean age of 57.3 years. The age ranged between 43 years-77 years. Most of the patients in our series reported after 6 hours of onset of symptoms and less than ten percent reported within the first 6 hours. None of the patients in our series reported during the first three hours of onset of symptoms. Most of the patients in our series were in 50-59-year age group followed by 60-69 age group. 78.08 % (n=57) of patients in our series had chest pain as the chief presenting complaint followed by other symptoms like breathlessness, sweating, nausea or vomiting. The different presenting symptoms of IHD in our series were overlapping and not mutually exclusive. Out of 73 total patients 12 patients constituting 16.43 percent were having a positive family history of cardiac diseases. In our series, hypertension and diabetes were the leading risk factors associated with IHD followed by dyslipidaemia, obesity and others like OCP pills. None of the patient in our cohort had positive alcohol or tobacco use history. The main results are presented in table 1.

Table 1. Demographic and other parameters of IHD patients (women).

S.No	Parameter	No of patients	Total/Percentage
1.	Age 40-49 years	3	4.10%
	50-59 years	53	72.60%
	60-69 years	12	16.43%
	>70 years	5	6.84%
2.	Chief Presenting Complaint	57	78.08%
	Chest pain Others	16	21.91%
3.	Positive family history (CAD)	12	16.43%

4.	Reporting Time		
	< 1 hour	Nil	-
	1-3 hours	Nil	-
	3-6 hours	11	15.06%
5.	> 6 hours	62	84.93%
	Type		
	STEMI	63	86.30%
	NSTEMI	10	13.70%

A total of 63 patients constituting 86.3% were diagnosed as STEMI and the remaining cases were NSTEMI based on the ECG findings. The main complication in our series was cardiac failure seen in seven patients.

Discussion

IHD remains to be the leading cause of deaths in women worldwide and with many studies reporting an increased rate among the Indian population. In our study we had the maximum cases in 50-59-year age group, which is similar to many other published series^{4,6,7,10}. This increased incidence in older age group can be attributed to dyslipidaemias and loss of protective effect of estrogen in post-menopausal women. Similar results were also seen in other published studies. As per the Framingham Heart study, incidence of IHD increased in both men and women with each decade within each age group, however, gender neutrality diminished with increasing age. In our study, 64 patients constituting 84.93% reported to hospital after 6 hours of onset of symptoms, furthermore, none of the patient in our series reported during the initial three hours. This could be explained by the fact that our hospital is in a remote area adjoining border and people don't have an easy access to transport facility and partially because of lack of awareness about the serious nature of symptoms. It further highlights the lacunae and need for awareness campaigns regarding symptoms of IHD in rural areas of our country. This finding is contrary to earlier published series, more than forty percent of cases presented within the first six hours in a study by Vaz et al and others¹¹⁻¹³. In our series 57 patients comprising 78.08% presented with chief complaints of chest pain and radiation followed by breathlessness and other symptoms. Our results are comparable to the study of Nagamalesh et al who had reported chest pain as the leading complaint in 93% of his patients¹⁴. In another study of Indian population Singh et al reported similar results with 90% patients having chief complaint of chest pain¹⁵. The most common complication seen in our series was cardiac failure seen in seven patients, 86.3% of patients in our series were diagnosed as STEMI on electrocardiography. These findings are similar to earlier published studies. In another study by PV Sancheti et al, the authors showed that, 26.72% of patients in their series had one or more clinical complications of ischemic heart disease. Patients having cardiac failure were 18.58%, cardiogenic shock as complication were 2.29%, arrhythmias were seen as complication in 1.02% patients. Patients having more than one complication as described above were 1.52%. Other clinical complications were seen in 3.31% patients¹⁶. In the study by S Bettgowda, 58 patients presented with myocardial infarction and 42 had angina. Males with IHD mostly present with myocardial infarction or sudden death as their first manifestation of disease, whereas female may have angina pectoris as their first symptom^{3,17}. In our series 12 patients had a positive family history of cardiac diseases constituting 16.43 %. Similar results were seen in other studies as well, reporting a positive correlation¹⁸. Dhar et al reported that a family history of premature IHD in a sister carries 12-fold higher risk for IHD in comparison to six-fold for a brother and three-fold for a parent⁸. In our study, hypertension was the most common risk factor followed by diabetes mellitus and dyslipidaemia and obesity. None of the patient in our series had history of alcohol or tobacco intake, this might be because of relatively conservative aspect of society especially in rural areas. Our results are comparable to other published series. In the study of Bettgowda, there were 73 patients of hypertension. Similar

association was observed in other studies^{3,7,19}. The systolic blood pressure in women continues to surge disproportionately until the age of 80 years. Hypertension leads to a fourfold risk of ischaemic heart disease in females compared to threefold in males²⁰. The main limitation of our study was small sample size and lack of robust statistical analysis to generalize any recommendations. Further research is needed in our country with specific emphasis on IHD in women especially in rural areas and its specific challenges.

Conclusion

There was a significant delay between the onset of symptoms and reporting to the hospital in our series, leading to loss of precious time. This can be attributed to lack of awareness about the gravity of condition and its symptoms and also on the inadequate transport facilities in the rural and hilly areas. There is a need to for awareness campaigns and improving the transport/ambulance services in rural areas for timely management. The most common risk factors for IHD in our series are Hypertension, Diabetes, Obesity & Dyslipidaemias and a positive family history of cardiac diseases.

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