

Review of Ischemic Heart Disease Patients admitted in Dhulikhel Hospital

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ABSTRACT

The ischaemic heart disease is one of the most common cause of preventable deaths. The number of deaths due to ischaemic heart disease has been reported to be on the rise in the low and middle income countries. Data on the prevalence and risk profile of ischaemic heart disease is scarce in Nepal. The aim of this study was to analyze the demographic and risk profile of patients with ischaemic heart disease admitted at Dhulikhel hospital.

115 patients in the period between 2008 to 2009 with the diagnosis of ischaemic heart disease were identified and analyzed. The mean age of patients with IHD was 62.9+/- 12.79 years and the youngest was aged 34 years. The number of male patients was greater (54.8%) than the females (45.2%). Among the risk factors hypertension and diabetes were more common in females, whereas smoking was more common in males. The study also showed more people with IHD came from rural than urban areas. In conclusion, the ischaemic heart disease is a rising public health problem affecting even the younger age groups and people from lower socioeconomic strata.

Key words: Ischaemic heart disease, Coronary Risk Factors, Dhulikhel hospital.

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INTRODUCTION

Ischaemic heart disease is one of the most common cause of preventable death and ranks fifth in terms of disease burden.¹ Whereas age-adjusted cardiovascular death rates have declined in several developed countries in past decades, rates of cardiovascular diseases have risen greatly in low-income and middle-income countries.² In 1990, two-thirds of the 14 million cardiovascular fatalities occurred in the developing countries.^{3,4,5}

Although, there has been emerging data on the prevalence of ischaemic heart disease in developing countries like India and other Asian regions, the national level data from Nepal is lacking. However, there are few hospital-based studies which have attempted to estimate the prevalence rate and analyze the associated risk factors for IHD. One study from Dharan showed the prevalence rate of 5.7% in eastern Nepal.⁶

Dhulikhel hospital is a university hospital providing its health services largely to the rural community people and some suburban populations. There has been an increasing trend in the rate of admission of IHD patients in recent years in Dhulikhel hospital, probably reflecting the increasing prevalence of IHD in this region of world as well.

The aim of this study was to analyze the demographic and risk profile of patients with ischaemic heart disease at Dhulikhel hospital.

METHODOLOGY

This is a retrospective analysis of 115 cases of ischemic heart disease patients admitted in Dhulikhel Hospital during 2008 and 2009. All the patients admitted during this period of time with the diagnosis of acute MI, unstable angina, CCF due to IHD were included for the study.

The patients with the diagnosis of IHD but admitted for other clinical problems, patients with incomplete documentation were all excluded. The demographic information and risk factors were obtained and analyzed using SPSS 13.0 version.

RESULTS

A total 115 cases of Ischemic heart disease were admitted in Dhulikhel Hospital during 2008 and

2009. Mean age was 62.9 ± 12.78 years with youngest being 34 and the oldest 94 years. Out of 115 cases, 62(54.8%) were males and 52 (45.2%) females (Male to female ratio was 1.19:1).

Table1. Age distribution of patients.

Age group	Frequency	Percent
31 – 40	8	7.0
41 – 50	12	10.4
51 – 60	27	23.5
61 – 70	34	29.6
> 70	34	29.6
Total	115	100

Table2. Gender distribution of patients.

Gender	Frequency	Percent
Male	63	54.8
Female	52	45.2
Total	115	100.0

Table3. Distribution of IHD patients among menopausal females compared to males of same age groups.

Age Group	Gender		Total
	male	female	
Less than 50 years	13	7	20
More than 51 years	50	45	95
Total	63	52	115

P-Value < 0.05.

Female patients with IHD less than 50 years of age in later part of menstruation was less in number compared to male counterparts though it was statistically insignificant.

Table 4 . Risk factors according to sex.

Risk Factors	Male	Female	p-value
Smoker	47 (75%)	29 (56%)	< 0.05
Hypertension	17 (27%)	17 (33%)	< 0.05
Diabetes	3 (5%)	8 (15%)	NA

Table 5. IHD patients from suburban region compared to rural.

Place	Male	Female	Total
Suburban	27	18	45 (40%)
Rural	36	34	70 (60%)

Among the identified risk factors for IHD, smoking was the most common followed by hypertension and diabetes mellitus. The smoking was significantly higher in males compared to female patients; whereas hypertension was similar in both groups. Diabetes mellitus was seen more with females; however, it was not statistically significant because of small number of patients. There was almost equal representation of patients from sub-urban (40%) and rural (60%) parts of the country.

DISCUSSION

IHD is a common public health problem in all parts of the world. Once thought a disease of the west and affluent society no longer holds true. The studies have shown the increasing prevalence of IHD in developing countries. In deed, some studies done in India have reported low socioeconomic status defined by low educational status associated with greater risk of first myocardial infarction.⁷ Some epidemiological studies have also reported greater prevalence of cardiovascular risks among the less educated and poor rural and urban subjects.^{8,9} The studies concerning on these issues from Nepal are small and scarce.

In this study of 115 patients with diagnosed IHD the mean age of the patient was 62.9±12.78 years which is quite similar to most of other studies. Another finding in this study is that the 7% of patients with IHD is below age 40, the youngest being 34 years of age. In a study by Shah et al in Nepal found upto 19.7% of patients out of 213 having first MI below 45 years of age; their mean age of first MI was 57±11 years lower than in our study.¹⁰ In a large case-control INTERHEART multinational study, out of 1732 patients from south Asian countries the mean age of first MI was 53.0±11.4 years which was lower than from other countries.¹¹ These findings show that the IHD is becoming more prevalent even in younger age groups.

The male to female ratio is 1.19:1. Out of 52 female patients 45 had IHD after age of 51 which correlates with the hormonal protective roles, 7 patients had before age 51; this could be correlated with the presence of other risk factors such as smoking and hypertension. Compared to male counterparts, the incidence of hypertension and diabetes were more in females (33 and 15%) respectively. In another study by Raut et al from Shahid Gangalal hospital found the similar results. Out of 283 MI patients, they found 53.3% and 32% of female patients having hypertension and diabetes associated respectively, which was greater than in male patients. The smoking as a risk factor was significantly higher in males than females (75% and 56%). In the study by Raut et al the smoking rate was 61.1% and 38.6% in males and females respectively.

In our study, 60% of patients are from rural as against 40% from urban areas. This discrepancy could partly be explained on account of majority of patients who visit Dhulikhel hospital are from rural parts of the country. However, the figure underscores the fact that the number of IHD may be increasing even in the rural and poor socioeconomic status groups.

The limitation of our study is that other major risk factors for IHD such as dyslipidemia and obesity were not included in this study.

CONCLUSION

Ischaemic heart disease is a common public health problem even in a rural part of Nepal and can affect younger age groups. Although, multiple risk factors are involved, the smoking and hypertension appear to be the most common and important risk factors for the IHD in this part of the country. Large scale effective preventive health campaign on these risk factors can help lower the incidence of IHD in the community.

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