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A Study to Observe Conventional Risk Factors Associated with Acute Coronary Syndrome.

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ABSTRACT

There is an increase mortality and morbidity caused by Acute coronary syndrome in India. Identifying conventional risk factors of ACS will help to curb the number of deaths and disability. To identify modifiable and non-modifiable risk factors of Acute coronary syndrome. A total of one hundred patients with acute coronary syndrome who got admitted in the Cardiology Department, Little Flower Hospital Angamaly were interviewed between January 2014 and January 2015. Patients were enquired about the presence of hypertension and diabetes mellitus. Information was also obtained regarding smoking and history of ischemic heart disease in their first degree relatives. Lipid profile was recorded from the investigation chart of every patient. In the 100 subjects 75 were male and 25 female showing prevalence of this disease is more in males. 88% of patients had two or more than two risk factors and 25% had four or more risk factors. Acute coronary syndrome is common in males between 51 to 60. Alcoholism and smoking have come up as the major risk factor.

Keywords: Acute coronary syndrome, conventional risk factors.

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INTRODUCTION

Acute Coronary Syndrome (ACS) is a unifying term representing a common end result, acute myocardial ischemia. It encompasses acute myocardial infarction (resulting in ST elevation or non ST elevation) and unstable angina [1,2].

Acute Coronary Syndrome comes under the umbrella of Coronary Heart (CHD) along with chronic CHD and sudden death. ACS has become one of the largest cause of death worldwide. In 2001 75% of global death and 82% of total DALYs lost caused by CHD occurred in low and middle income countries.3 In 2002, CHD caused 7.2 million deaths worldwide and accounted for about 40 million individual with CHD are alive today [2].

In India, in the last three decades, the prevalence of CAD has increased from 1.1% to about 7.5% in the urban population and from 2.1% to 3.7% in rural population [4].

Indians living abroad have much higher incidence of coronary heart disease (CHD) as compared to all other ethnic groups. It is consistently observed that Indians have premature CAD and that their risk for CAD was two to four times higher than the white European population [5].

It is foreseen that more than half of the worldwide cardiovascular disease burden will be borne by Indian subcontinent in the next decade according to a recent epidemiological studies [6].

The purpose of this study is to collect data of patients presenting with ACS in Little Flower Hospital, Angamaly, so as to study the profile of conventional risk factors of ACS.

MATERIALS AND METHODS

Participants

The study was conducted in 100 patients both male and female fulfilling the inclusion criteria admitted with acute coronary syndrome in Little Flower Hospital, Angamaly.

Inclusion criteria

Patients with acute coronary syndrome having clinical history of ischemic type of chest pain, charactestic ECG changes, rise and fall of serum cardiac biomarkers.

Exclusion criteria

Patients with chronic stable angina, cardiovascular diseases resembling myocardial infarction.

Study design

Cross-sectional study.

Methods

Data was collected from department of medical records.

Ethical consideration

The present study was approved by institutional ethical committee and free, written voluntary informed consent was taken from all the participants.

Data analysis

Data was analysed using spss 20.0. statistical tests used are frequency, percentage and chisquare test.

RESULTS

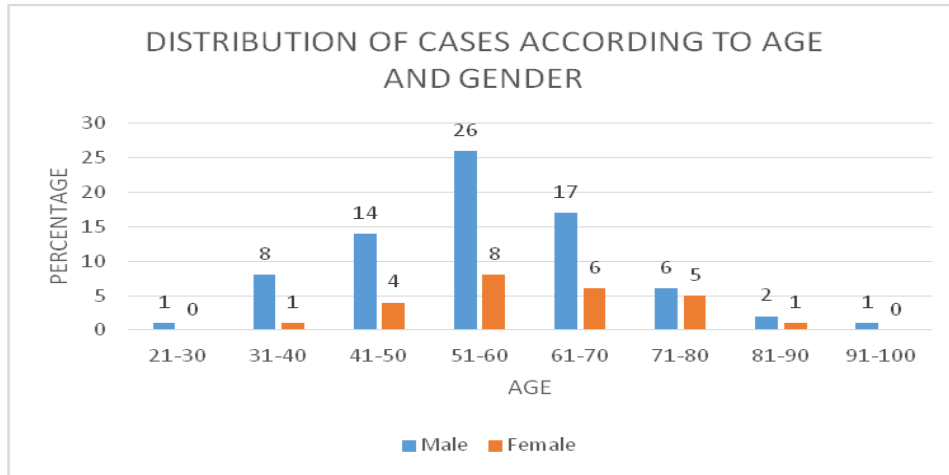Results were presented in fig no.1, fig no.2 and table 1

Figure 1: Distribution of Cases According To Age And Gender

The mean age was 56.9±13.05. most cases were seen in the age group 51-60. In the population 70% suffered from myocardial infarction and 30% from unstable angina.
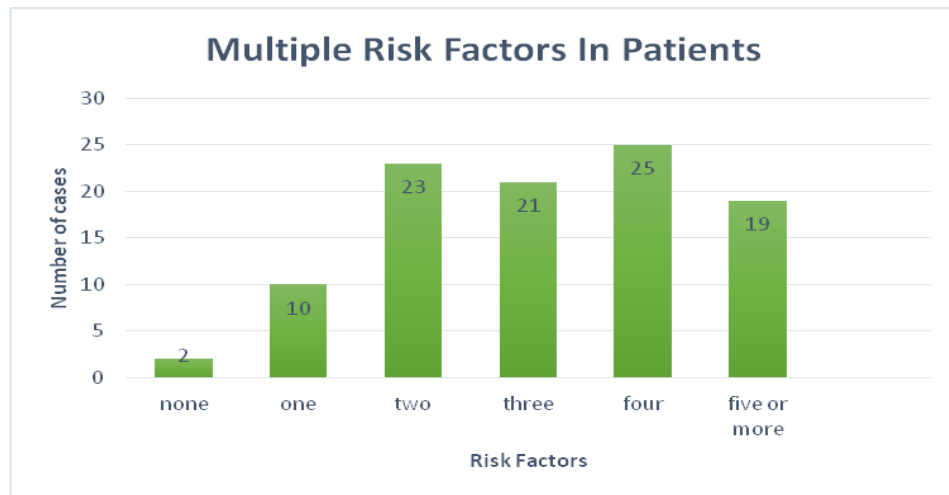

Figure 2: Multiple Risk Factors In Patients (88% patients had more than two risk factors. 25% had four risk factors.)

RISK FACTORS	MALES	FEMALES	p value
SMOKING	49	0	0.00
ALCOHOLISM	58	0	0.00
DYSLIPIDEMIA	21	9	0.571
DIABETES MELLITUS	42	10	0.165
HYPERTENSION	37	17	0.104
OBESITY	31	11	0.815
SEDENTARY ACTIVITY	30	15	0.060
POST MENOPAUSAL	0	20	-
FAMILY HISTORY	26	4	-

Table 1: Distribution according to risk factors

Overall most commonly seen risk factor was alcohol and smoking, then diabetes mellitus. In females no smokers or alcoholic were seen

DISCUSSION

In this study we found that majority of patients had at least one conventional risk factors. It was reported that that prevalence of risk factors was very high.[7] We agree with earlier studies [8,9,10, 12]. Prevalence of ACS was more in males than females, indicating that males have three times higher risk of getting ACS than females. Smoking was one of the major risk factor identified in our study. Majority of males were smokers . Prevalence of smoking was low in female population. Dyslipidemia was observed in 30% of total population. This correlates with the findings that was reported by KJ Raihanathul Misiriya [12]. However the study conducted by PS Singh8 showed a lower percentage of population having dyslipidemia. In study conducted by Gonzalez-Pacheco [7], it was seen there were higher percentage of population with dyslipidemia. Hypertension was observed in 54% of total population. This correlates with findings of Gonzalez-Pacheco [7]. T CREATE study [11] reported a lower percentage. Diabetes mellitus was observed in 52% of patients. However in the CREATE study [11] only 37% of the patients had Diabetes Mellitus. We agree with earlier studies.

Obesity is an independent coronary risk factor. In the study it has been observed that 42% were having BMI above 25 and 8% were obese having BMI above 30. It correlates with the study conducted by PS Singh. CREATE Study [11,14] reported that 28.8% of patients were having BMI above 25 and 6.7% were having BMI above 30 falling under obese category.

Sedentary physical activity was seen in 53% of the patients in this study. Moderate activity in 32% and heavy activity in 15% of patients. It correlates with the study conducted by Morris JN[13] where he reported that 43% of his coronary artery disease group were having sedentary life-style, 38.20% were involve in moderate activity and 18.76% in heavy activity.

Limitations

We have taken patients from a single hospital so the results cannot be generalised to other geographical areas.

CONCLUSION

We conclude that at least oone risk factor was present in majority otf patients with ACS. Alcohol consumtion and smoking were major risk factors. Prevalance was high in 51-60 year age group people. We recommend further detailed study in this area with higher sample size.

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