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Knowledge Regarding Preventive Measures of Coronary Artery Disease among Patient Attending Out Patient Departments of Selected Hospital Of Ludhiana City

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Abstract: **CAD is the leading cause of death globally and one of the major health burdens worldwide. Smoking, dyslipidemia, hypertension, diabetes, obesity and physical inactivity are modifiable & preventable risk factors. This study attempted to quantify knowledge regarding preventive measures of Coronary Artery disease among patients attending OPD of selected hospital of Ludhiana city. Information was collected from 150 patients attending medical and surgical OPD's who were not diagnosed with any of heart disease. Questionnaire related to Socio demographic variables and knowledge items related to prevention of coronary artery disease was used to collect the information. The result revealed that only 15.33% of subjects had good level of knowledge, and 84.67% subject had poor level of knowledge regarding prevention of CAD. The highest mean knowledge score of 14.55 ± 0.65 was in the age group of 41-50 years. The study recommends the need of awareness raising program regarding preventive measures of CAD to decrease the burden of such devastating disease.**

Keyword: **Knowledge, Coronary Artery Disease, Preventive measure, Risk factor.**

I. INTRODUCTION

Heart Disease especially Coronary artery disease (CAD) is leading cause of death globally and one of the major health burden worldwide.[1] Coronary artery disease can negatively affect the quality of life and financial status of a person[2] .

The high risk and wide prevalence of CAD among the general Indian population is well established [3],[4]. CAD remains the highest cause of mortality in India, and the majority of cases are due to risk factors that include hypertension, smoking, Diabetes Mellitus (DM), and elevated serum cholesterol levels [5]. In particular, the incidence of acute myocardial infarction (AMI) in developing countries like India is especially alarming because it contributes to one third of all deaths stemming from heart disease. The gravity of this situation is emphasized by a recent projection from the WHO and the Indian Council of Medical Research (ICMR), which predicts that India will be the MI capital of the world by 2020. Sharma and Ganguly [6] call for urgency in reducing premature coronary artery disease risks and point to the prevention of CASHD before onset as a better suited method than intervening at a later stage of disease development. This has led members of the medical community to press for a concerted educational drive towards prevention of heart disease [7].

Progressive urbanization, and adoption of a "western" lifestyle contributed to the rising burden of cardiovascular disease (CVD) in the developing world [3],[8]. Developing nations continue to be ill-equipped to handle this burden and this coupled with poor literacy rates and lack of awareness of disease symptoms result in worse disease outcomes . This is reflected in the rising rates of hospital admissions and mortality from CVD at an early age [9],[10],[11], which in turn inflate the disability adjusted life year (DALYs) [11],[12].

Prevention of CVD is the most effective way of combating the CVD epidemic in the resource poor nations. Although knowledge alone is insufficient, it is assumed to be a key component of behavioural change decision making [13], and provides cues for action [14]. Estimating the level of knowledge of the population at large can help to guide public health programs especially those directed towards reducing modifiable risk factors for CVD. One method of targeting preventive educational strategies involves measuring and appropriately disseminating knowledge of the preventive measures.[15]

The risk of CAD is greater in urban settings compared to rural areas of India. [16] A particularly high prevalence of risk factors has been noted in industrial settings. [17] This warrants attention in assessing the knowledge of CAD among those living in large cities. A similar study, carried out by R.A. Pandey and Ismita Khadka to assess Knowledge regarding preventive measures of heart disease among the adult population in Kathmandu, revealed that among total respondents, 57.8 percent had adequate knowledge on heart disease. However, not much studies are carried in Indian setting to evaluate knowledge regarding preventive measures of CAD. Thus the researchers carried out this study to evaluate the knowledge regarding preventive measures of CAD among OPD patients of selected hospital.

II. MATERIAL AND METHODS

The cross sectional study was conducted in the outpatient departments of Guru Teg Bahadur Hospital, Ludhiana. Eligibility criteria for inclusion included OPD patients who can understand or read Punjabi language. 150 patients attending medical and surgical OPD's and not diagnosed with any of heart disease were recruited in the study by using simple random sampling. Information was collected by administering a pretested questionnaire to the subjects. The Questionnaire related to Socio demographic variables and knowledge items related to prevention of coronary artery disease was developed by reviewing literature. After establishing content validity of the instrument, it was translated to vernacular language. Permission to conduct study was taken from the concern authority of the selected hospital.

After explaining purpose of the study and taking verbal consent from the participants, the subjects were asked to fill the questionnaire in the presence of nursing students. They were not permitted to communicate with each other.

The Socio-demographic variables of the study included age, gender, education, and habitat of the subjects. Questionnaire related to knowledge items regarding prevention of coronary artery disease consisted of 25 open ended multiple choice questions. The knowledge questions contained six questions related to the effects of proper diet as a preventive factor for the coronary artery disease and the effects of an inappropriate diet as a risk factor for coronary artery disease. It contained three questions each for management of hypertension, diabetes, stress, maintenance of healthy weight and active life style, and two questions each for smoking cessation and limited alcohol intake as preventive measures. Data were coded, validated and analyzed using SPSS (version 18). Each of the 25 knowledge questions were rated using a score of one for correct answer and zero for an incorrect answer, with a total score ranging from 0-25. Subjects having a score above 70^{th} percentile i.e. with score of 18 and above were regarded as having good level of knowledge.

III. RESULTS

Majority of the subjects were of the age group of >40 years with mean age of 41.86 years and standard deviation of 12.27. Data was collected from equal number of males and females (75 each) with maximum subjects from urban community (54%). Majority 66% subjects were educated up to senior secondary or less, however only 34% were graduates. The result revealed that only 15.33% of subjects had good level of knowledge, and 84.67% subject had poor level of knowledge regarding prevention of CAD. The highest mean knowledge score of 14.55 $\pm$ 0.65 was in the age group of 41-50 years. Mean knowledge score was almost equal in both gender with males having slightly more mean knowledge score of 13.86 than of their counterpart. Subjects from rural community had more mean knowledge score of 13.50 as compared to that of urban community, who had mean knowledge score of 13.25. Subjects with educational qualification of graduation and above had more mean knowledge score of 14.49 as compared to those studied up to senior secondary educational level. However the relation of knowledge regarding prevention of CAD with selected socio-demographic variables was non-significant at $p< 0.05$. (Table 1)

Table 1: Comparison of mean value of CAD prevention knowledge score among subjects					
Variable		n	Mean Score	Standard Deviation (±)	P value
Age	< 40years	68	13.84	3.27	0.13
	> 40 years	82	14.55	2.45	
Gender	Male	75	13.86	3.88	0.32
	Female	75	13.29	3.10	
Habitat	Rural	69	13.50	2.95	0.62
	Urban	81	13.25	3.18	
Education	≥ 10+2	99	13.82	2.52	0.19
	Graduate and above	51	14.49	3.79	

IV. DISCUSSION AND LIMITATIONS

Findings of the study reveal that majority study subjects had poor knowledge regarding prevention of CAD. The findings of the study are consistent with various previous studies [17],[18], [19], [20]. In this study the knowledge is compared with the variables such as age, gender, education, and habitat of the subjects. The study found a non-significant difference in level of knowledge regarding prevention of CAD among males and females. The finding is similar to the findings of the study conducted by Almas (2008) [21] which showed no significant association between gender and knowledge. Furthermore the study also found non significant association of knowledge regarding CAD with other variables such as age, habitat and education of the subjects. The study has a limitation that the sample was drawn from a local hospital, the characteristics of people who register in the hospital may differ from that of the local population. Furthermore, as it was a quantitative study, the data collected were relatively brief and concise.

V. CONCLUSION

As coronary artery disease is growing as significant problem in developing countries, prevention is the most effective measure to combat this killer disease, especially in resource poor nation. Thus identifying knowledge regarding preventive measures has utmost importance to bring change in health behaviour of people.

Based on findings it can be concluded that a significant percentage (84.67%) of study subjects have limited knowledge regarding preventive measures of Coronary artery disease. There was no association between the knowledge and selected variables such as age, gender, habitat and education. The findings of the study put an emphasis on need of Public awareness campaign regarding prevention of CAD. Furthermore it represents the need for health workers to put extra efforts in planning and conducting educational programme to enhance awareness of general population regarding modifiable risk factors of the disease. Also, people should be encouraged to bring out health behaviour changes as early as possible in order to promote healthy heart, especially in old age.

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