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PREVALENCE OF RISK FACTORS FOR CORONARY ARTERY DISEASE AMONG ADULTS

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ABSTRACT A descriptive study was conducted to assess the prevalence of risk factors for coronary artery diseases among adults. The objectives of the study were to estimate the prevalence of risk factors for coronary artery disease among adults, to determine the association between level of risk for coronary artery disease and selected socio personal variables. The study was conducted among 700 samples and the major risk factors identified were, cardiovascular history (17%) , sedentary Life style practices (59.4%), Stress(76%) ,Sleep pattern (7.3%), Bowel toxicity (4%), Elevated blood sugar (24.1%),Inflammation and pain (49.7%) ,Dietary pattern (1.1%), elevated systolic blood pressure 34.7%, Elevated lipids (1.4%) and waist circumference (51%). Overall, the prevalence of risk factors shows 6.4% had low risk for coronary artery disease, 52.4%, 31.4%, 9.8% of subjects had medium risk, high risk and very high risk respectively. There was a significant association between age, gender, marital status, type of family and socio economic status with risk for coronary artery disease where the (p<0.001). The study concluded that the population need to be cautious about the factors contributing to coronary artery disease for a healthy life.

INTRODUCTION

Coronary artery disease (CAD) is a type of blood vessel disorder that is included in the general category of atherosclerosis. The term atherosclerosis comes from two Greek words athere meaning "fatty mesh" and skleros meaning "hard" it implies that atherosclerosis begins as soft deposits of fat that harden with age. Coronary heart disease is forecast to be the most common cause of death globally, including India, by 2020, and it is high among people with Indian origin . In India, CAD rates have increased during the last 30 years, whereas declining trends have been noticed in developed Western countries .

The current status of heart disease in India is alarming, with projections suggesting that by the year 2020, the burden of coronary artery diseases in India will surpass that of any other country in the world.It is estimated that 17.5 million people die each year in India from cardiovascular diseases, amounting to a staggering 31% of all deaths world wide.There are estimated 40 million heart patients in India. out of which 19 million reside in urban areas and 21 million in rural areas. This suggests heart diseases are fast becoming an epidemic in rural India.

In Kerala 4% of all deaths are caused by coronary artery disease and the prevalence of lifestyle diseases like diabetes, heart disease, high blood pressure and obesity is high and it result in very high mortality and morbidity from heart disease. In Kerala mortality rates for CAD (coronary artery disease), per 100,000 are 382 for men and 128 for women which is actually 3 to 6 times higher than Japanese and rural Chinese and also higher than other industrialized countries.

The average age of a first heart attack decreased by at least 10 years in Kerala, in sharp contrast to a 20 year increase in many western countries. The high rates of premature heart disease in Kerala also results in a high economic burden as high as 20% of its state domestic product. Hospitalization for a heart attack results in catastrophic health spending in more than 60% of the high income and more than 80% of low income Keralites with 50 % of these requiring distress financing.

Statement of the problem

A descriptive study to assess prevalence of risk factors for coronary artery disease among adults

METHODOLOGY

Research Approach : quantitative approach.
Research Design: descriptive design.

Variables

Dependent Variables
• Coronary artery disease
• Independent variable
• Major risk factors
• Cardiovascular history
• Life style practices
• stress
• bowel toxicity
• elevated blood sugar
• dietary pattern
• elevated lipids
• elevated blood pressure
• waist circumference

Setting of the study:

The setting chosen for the study was Nellanad panchayath of Trivandrum district.

Population: Adults above age group of 30yrs

Sample: The samples for the present study consist of 700 adults above age 30 years residing in Keezhaikkonam, Thottumpuram, Alanthara, Muroorkkonam and Mukkunoor wards of Nellanad grama panchayath, Trivandrum district.

Sampling technique : Non probability convenient sampling technique.

Sample size: A total of 700 samples were selected for the study.

Sample selection criteria
Inclusion Criteria

The present study included the adults:-
• Above age group of 30.
• Who are willing to participate

Exclusion criteria

• Who cannot understand Malayalam.
• Who are not available at the time of data collection

- Who are diagnosed with CAD
- Tools and Techniques
- Socio-personal Performa
- Cardiovascular risk assessment
- Questionnaire

RESULTS
In this study majority 42% belongs to the age group of 45-59 years. About the male and female ratio, more than half of the respondents were females (53%) and males were only 47

Risk factors assessment for coronary artery disease
- Based on the presence of cardiovascular history(family history), 17% of the subjects having high risk for CAD, (83%) have low risk .
- Based on life style practices, (4.9%) of subjects had low risk,(35.7%) had medium risk and (59.4%) of subjects had high risk for CAD.
- Based on stress (0.9%) of subjects had low risk for CAD, (23.1%) had medium risk and (76%) had high risk .
- Based on sleep pattern (67.4%) had low risk, (25.3%) had medium risk and (7.3%) had high risk for coronary artery disease
- Based on the presence of bowel toxicity (53.3%) of subjects had low risk , (42.7%) had medium risk and (4%) of subjects had high risk for CAD.
- Based on the presence of elevated blood sugar (60.6%) had low risk, (15.3%) of subjects had medium risk and (24.1%) had high risk for coronary artery disease.
- Based on the presence of inflammation and pain (50.1%) of subjects had low risk for coronary artery disease , (49.7%) of subjects had medium risk .
- Based on dietary pattern (98.9%) of subjects had low risk for coronary artery disease , (1.1%) of subjects had medium risk.
- Based on elevated lipids (92.3%) of subjects had low risk, (6.3%) of subjects had medium risk and (1.4%) of subjects had high risk for coronary artery disease.
- Based on elevated systolic blood pressure (37.3%) of subjects had low risk for CAD , (34.7%) had medium risk and (28%) had high risk .
- Based on waist circumference (22.4%) of subjects had low risk for CAD, (26.6%) medium risk and (51%) high risk.

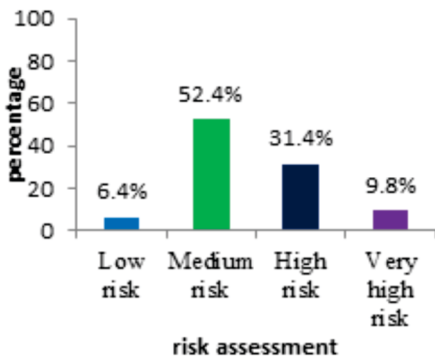### Prevalence of risk for coronary artery disease

Fig 1: Bar diagram showing percentage distribution of subjects based on level of risk for coronary artery disease

- Based on level of risk assessment, the prevalence shows (6.4%) of subjects had low risk for coronary artery disease, (52.4%) of subjects had medium risk for coronary artery disease , (31.4%) of subjects had high risk for coronary artery disease and (9.8%) of subjects had very high risk for coronary artery disease .
- There was a significant association between age, gender, marital status, type of family, socio economic status with risk for coronary artery disease at (p<0.001).

CONCLUSION:
There is paucity of data on prevalence of CAD and its risk factors in India. The study is hoped to serve as a baseline data for assessing future trends in the prevalence of the disease and to make the population cautious about their life style.

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