Risk factors of coronary artery disease among adults

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***Abstract*-The present study was aimed to assess the risk factors of coronary artery disease among adults conducted in Sree Gokulam Medical College and Research Foundation Thiruvananthapuram. *The objectives* of the study were to assess the risk factors for coronary artery disease among adults. *Methodology:* The researcher adopted a quantitative research approach. Consecutive sampling technique is used to collect data from a total of 276 samples. For each case enrolled in the study a control that is matched for sex and age (+/-2) is enrolled. Cases-were both male and female patients aged between 30-60 years, diagnosed with CAD asper Monica's criteria, attending or admitted under various department of Sree Gokulam Medical College Hospital, Venjaramoodu, *Controls*-were both male and female patients agedbetween 30-60years, without CAD attending or admitted under various departments, except cardiology and neurology departments of Sree Gokulam Medical College Hospital, Venjaramoodu ,.Data was collected using Structured questionnaire and Perceived stress scale.**

***Key words*: Risk factors; coronary artery disease; adults**

I INTRODUCTION

"Your heart is the softest place on earth take care of it"
(Nayyirash Waheed)

Heart disease has remained the leading cause of death at the global level for the last 20 years. Non communicable diseases like coronary artery diseases kill 41 million people every year
,therefore investing in better management of coronary artery disease is critical. According to recent statistics by World Health Organisation, an estimated 17.9 million people died due to non-communicable diseases in 2019, representing 32% of all global deaths. Of these deaths, 85% were due to coronary artery disease

II CORONARY ARTERY DISEASE.

Coronary artery disease (CAD) is a condition that affects the coronary arteries, which supply blood to heart. With coronary artery disease, plaque buildup narrows or blocks one or more of the coronary arteries. Chest discomfort (angina) is the most common symptom.(WHO, 2020)

Case- refers to the patients who were diagnosed as CAD (as per Monica criteria) attending or admitted under a tertiary care hospital Thiruvananthapuram during the study period.

Control-refers to the persons without CAD who are attending or admitted under various departments ,except neurology and cardiac departments of Sree Gokulam Medical College Hospital ,Venjaramoodu during the study period.

Risk Factors- in this study ,risk factors of CAD refers to family history, lifestyle factors(smoking, alcoholism, physical activity, sleep pattern),stress and presence of co- morbidities & obesity which are assessed by interview schedule and bio physiological measurements.

Adults-in this study, adults refers to persons between the age group of 30-60yrs

III SIGNIFICANCE IN IDENTIFYING RISK FACTORS OF CORONARYARTERY DISEASE

At least three-quarters of the world's deaths from coronary artery disease occur in low- and middle-income countries. People living in low- and middle-income countries often do not havethe benefit of primary health care programs for early detection and treatment of people with risk factors for coronary artery disease. People in low- and middle-income countries who suffer from coronary artery disease and other non- communicable diseases have less access to effective and equitable healthcare services which respond to their needs. As a result, for many people in these countries detection is often late in the course of the disease and people die at a younger age from coronary artery disease and other non- communicable diseases,often in their most productive years. The poorest people in low- and middle-income countries are most affected. At the household level, evidence is emerging that coronary artery disease and other non-communicable diseases contribute to poverty due to catastrophic health spending and high out-of-pocket expenditure. At the macro-economic level, coronary artery disease place a heavy burden on the economies of low- and middle-income countries.

IV THE SAMPLE OF THE STUDY

Cases-are both male and female patients aged between 30-60yrs,diagnosed with CAD as perMonica"s criteria ,attending or admitted under cardiac and medicine department of Sree Gokulam Medical College Hospital ,Venjaramoodu, during the study period.

Controls-are both male and female patients aged between 30-60yrs, without CAD attending or admitted under various departments

, except cardiology and neurologyof Sree Gokulam Medical College Hospital ,Venjaramoodu , during the study period.
Sampling technique- Consecutive sampling technique is used for selecting subjects in the study.
The cases and controls were selected based on the sample characteristics used in the study. For each case enrolled in the study a control that is matched for sex and age (+/-2) was enrolled so as to obtainthe matched cases and controls.
Sample size
Sample size is estimated to be 138 in each group

V THE TOOLS USED FOR THE STUDY

Section A:-Socio-personal proforma
Section B:-Coronary artery disease risk assessment questionnaire
Section C:-Perceived stress scale

VI CONCLUSION

In the present study known family history on the likelihood of CAD depicts that 5.3% variation in CAD. Subjects with known family history of CAD were 2.4 times more likely to exhibit CAD which is highly significant (p<0.001). Known co- morbidities on the likelihood of CAD shows that 52.3% variation in CAD. Subjects with hypertension were 1.79 times morelikely to exhibit CAD which is highlysignificant (p<0.001). Similarly, subjects with diabetes mellitus were 2.91 times more likely to exhibit CAD which is highly significant (P 0.001) and subjects with DLP were 4.304 times more likely to exhibit CAD which were highly significant (p<0.001). The risk of obesity on the likelihood of CAD shows that 8.3% variation in CAD. Subjects with obesity of CAD were 3.047 times more likely to exhibit CAD which is highly significant (p<0.001), and subjects with high waist circumferencewere 2.33 times more likely to exhibit CAD with significance (0.002*).
The risk of life style factors on the likelihood of CAD noted that 7.9% variation inCAD. Subjects with known life style factors of CAD which includes the history of smoking, alcoholism, physical activity and sleeping pattern disturbance. The subjects with the history of smoking were 3.3041times more likely to exhibit CAD which is significant (p =0.001***), The subject had the history of alcoholism is not significant (p 0.211) .sleeping pattern disturbance were 1.1769 times and poor physical activity were 1.7548 times more likely to exhibit CAD and the poor physical

activity is significant (p 0.02*). The risk of unhealthy food habits on the likelihood of CAD despites that 7.2% variation in CAD subjects with the persons followed recommended dietary habits. The subjects with the habit of excess intake of salt is 1.2934 times likely to produce CAD, excess Intake of packet and processed food is 1.1829 times likely to produce CAD , decreased Intake of fruits and vegetables is 1.3421 times likely to produce CAD , increased intake of fatty meat and dietary fat is 1.9654 times likely to produce CAD, increased intake of cooking oil is 1.5426 times likely to produce CAD , Intake of coconut oil rather than PUFA/MUFA is 1.5581 times likely to produce CAD, Intake of fish less than 3 times/week is 1.6221 times more likely to exhibit CAD , High Intake of fatty meat and dietary fat is significant (p 0.008*) and Intake of increased cooking oil is significant (p 0.020*) . The risk of perceived stress shows that 4.8% variation in CAD subjects with stress is 1.329 timesmore likely to exhibit CAD which is significant(p 0.002*)

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