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A Study to Assess the Risk Factors of Myocardial Infarction Among Women with Coronary Artery Disease Attending Cardiology Department of Government Medical College Hospital, Kottayam

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***Abstract*: Coronary artery disease is a leading contributor to global mortality and morbidity. Internationally, it is the cause of approximately a third of total death per year, with mortality rates ranging from 20% to 50% in middle income countries. CAD is assumed to be an epidemic proportion in India. Cardiac disease is a chronic health condition, which may also present with acute events. *Objectives:* To identify the risk factors of MI among women with CAD attending cardiology department of Govt. Medical College Hospital, Kottayam. Materials and *Methods:* The study was based on the concept of Pender's Health Promotion model. The data were analyzed using descriptive statistics. Cross-sectional survey was the selected research design. A sample size of 60 female patients with CAD attending cardiology department of MCH, Kottayam were selected for the study. The tools used for data collection were proforma for socio personal data sheet, clinical data sheet and checklist to assess the risk factors of myocardial infarction among women with CAD. Operational Definitions: a) Risk factors of myocardial infarction: Factors that increase the incidence of myocardial infarction among women such as diabetes, hypertension, hyperlipidemia, etc. as measured by checklist. b) Women with CAD: In this study, it refers to women above 30 years of age having coronary artery disease, attending cardiopulmonary department of Medical College Hospital, Kottayam. With regard to the modifiable risk factors, the present study revealed that 47% of the patients were having diabetes mellitus, 60% were having hypertension and 40% were obese (BMI ≥ 25 mg/dl). It also showed that about 20% 0f the patients were having HDL cholesterol <40 mg/dl,30% having LDL cholesterol>100 mg/dl, and 32% having cholesterol > 200 mg/dl. The data shows that 55% were having physical inactivity. With regarding to contributing factors, 63% had attained menopause and 58% had stressful life.**

***Keywords*: Risk factors of myocardial infarction, Women with CAD.**

1. Introduction

Heart is the body's engine room, responsible for pumping life-sustained blood through 60,000-mile-long network of vessels. Cardiovascular disease (CVDs) has become an important cause of mortality. Coronary artery disease (CAD) is of significant human cost and financial burden worldwide. Individual's lifestyle, hereditary history, and environmental factors are the risk factors in the development of coronary vascular disease. Estimates from the World Health Organization (WHO) show that by 2030, cardiovascular disease will be the main cause of death throughout India, accounting for more than 35% of all deaths. Rapid development and the resulting changes in the social fabric and physical environment are driving the cardiovascular diseases and other chronic diseases epidemic in India and other low- and middle-income countries. The prevalence rates of CAD in India have increased from 1.6% to 7.4% in rural populations and from1% to 13.2% in urban populations [6]. CAD in Kerala is premature and malignant resulting in death at a very young age. Approximately 60% of CVD death in men and 40% CAD death in women occur before age of 65 years. Prevalence of heart disease in rural Kerala is 7%, which is nearly double that of North India. The dramatic increase in premature CAD in Lateral is due to corresponding increase in the modifiable risk factors related to life changes. The contributing factors include unhealthy diet, sedentary lifestyle, high consumption of alcohol, lack of physical activity and air pollution, along with very high intake of saturated fats.

In 2019, total of 5733 patients admitted with Acute Coronary Syndrome in Medical College Hospital Kottayam, in that about 2290 were women. It is about 30-40 percent of total admissions with Acute Coronary Syndrome. Even though incidence of MI is very high among women, awareness of contributing factors and preventive aspects is not given much importance.

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2. Statement of Problem

A study to assess the risk factors of myocardial infarction among women with coronary artery disease attending cardiology department of Govt. Medical College Hospital, Kottayam.

3. Objectives

1. To identify the risk factors of MI among women with CAD.
2. To prepare information leaflet on reduction of risk factors of Myocardial Infarction among Women with CAD.

4. Materials and Methods

The study was based on the concept of Pender's Health Promotion model. The data Were analyzed using descriptive statistics. Cross sectional survey was the selected research design. A sample size of 60 female patients with CAD attending cardiology department of MCH, Kottayam were selected for the study using convenient sampling technique. The period of data collection was for two weeks. The tools used for data collection were proforma for socio personal data sheet, clinical data sheet and checklist to assess the risk factors of myocardial infarction among women with CAD

1) Delimitations

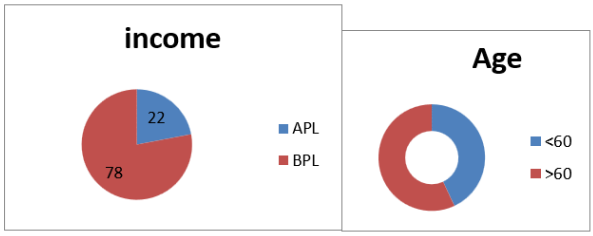
a) The study will be delimited to women above 30 years of age attending cardiology department of Medical College Hospital, Kottayam.

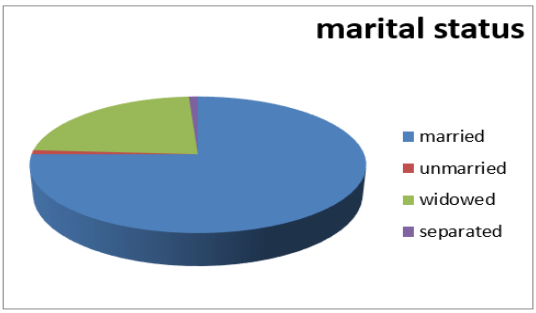
b) The study will be for a period of 2 weeks only.c) The sample size of the study is 60.

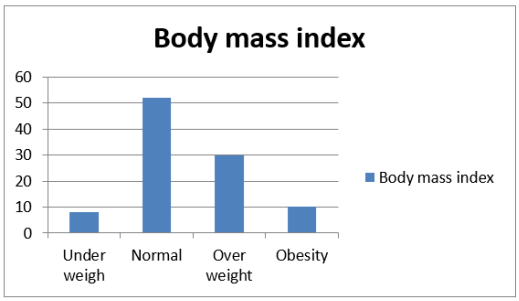
5. Research Methodology

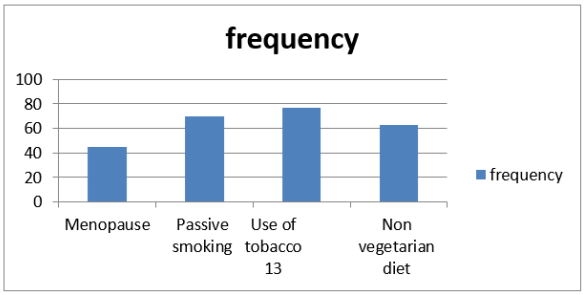
1. *Research approach*: A research approach adopted for the present study was quantitative research approach.
2. *Research design*: A research design adopted for the present study was descriptive cross sectional survey design.
3. *Setting:* Setting of the present study was Cardiology Department of Medical College Hospital, Kottayam.
4. *Population*: The study population consists of women with CAD above 30 years of age attending cardiology department.
5. *Sample:* The study sample includes women with CAD above 30 years of age attending Cardiology Department of Medical College Hospital, Kottayam.
6. *Sample size*-60
7. *Sampling technique*: The technique used is Purposive sampling.
8. *Inclusion criteria*: Women who are willing to participate in the study. Women above 30 years of age.
9. *Exclusion criteria*: with heart diseases other than CAD. Women suffering from mental illness.• Women with Alzheimer's disease.
10. *Tools and techniques*: The following tools were developed to collect data to assess the risk factors of MI among women with CAD. Tool 1.1-Socio personal data, Tool 1.2-Clinical data sheet, Tool-2: checklist to assess the risk factors of MI among women with CAD.

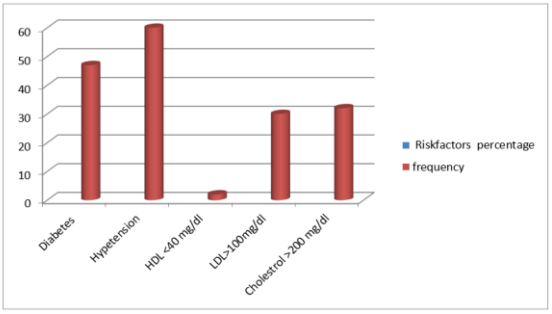
6. Result and Discussion











7. Findings of the Study

The following are the major findings of the study

1. Among 60 samples, 56.6% of patients belonged to the age group of >60 years.
2. Majority of the patients (65%) were Hindus and 75% were married.
3. The data showed that 65% of patients had only primary school education and 73.3% were unemployed.
4. With regard to income, 78.3% belongs to BPL category.
5. Majority of the patients (85%) residing in Panchayat.
6. The data depicted that majority of the patients (98.3%) had family as the support system
7. The data pointed out that majority of the patients (51.7%) had normal BMI.
8. With regard to risk factors of myocardial infarction, 85% were having age more than 50. 33.3% had family history and 53.33% had previous history of MI.
9. About 20% of the patients were having HDL cholesterol <40mg/dl, 30% were having LDL cholesterol>100mg/dl and 32% were having Total cholesterol>200mg/dl.
10. Among the samples, 55% of the patients were having lack of regular physical activity for at least 30 minutes a day, 10% were using oral contraceptives.

1) Nursing implication

Nurses are crucial members of the healthcare team who play a key role in the preventive, promotive, and rehabilitative aspects of health.

2) Nursing practice

Nurses are the key providers of preventive, promotive, curative and rehabilitative services to society. The expanded knowledge of nurses emphasizes on those activities which promote health. The nurse always come in contact with women CAD patients and their relatives in both outpatient and inpatient department. Systematically and orderly planned health information regarding prevention of MI is very much beneficial for them. This will help them to follow proper measures and thus prevent complications.

3) Nursing education

Based on the findings of the study nurse educators can teach the students about the prevalence of risk factors contributing to MI. Educators can equip the student nurses to sharpen their skill in health education. The instructional module developed based on the result of this study can be utilized by the students to plan and provide health education on management of risk factors of MI among women with CAD.

4) Nursing Administration

Nurse administrators facilitate activities to improve knowledge and practice of patients towards significant health problems. Nurse administrators can utilize the findings of this study as well as educational instructional module for providing in service education. The instructional module can be given to women patients with CAD and also their care takers during outpatient visit.

5) Nursing research

Based on the findings of the study, nurses can take initiative to conduct more research studies on various aspects of MI with larger sample. The nurse researchers can utilize the present study for future references.

6) Discussion

Another cross-sectional survey was done to determine the prevalence of cardiovascular risk factors among urban adults in a north Indian city was similar to the present study. It revealed that the most prevalent cardiovascular risk factor in fourth decade and onwards was overweight/obesity (59-85%). The prevalence of cardiovascular risk factors significantly increased with age and prevalence of low HDL-C was significantly more common in women as compared to women. The present study gain strength from a similar population based cross sectional study conducted at Raja Muthiah Medical College Hospital, Tamil Nadu, India on risk stratification of acute myocardial infarction in rural women on admission. In the study 38% of patients were from 60-69 years followed by 50-59 years. Diabetes mellitus, hypertension and hypercholesterolemia were seen highly in the study group. 68% of women were using tobacco, 60% had family history of disease. Isolated systolic hypertension, obesity and tobacco chewing shown high mortality rate in the study group.

8. Conclusion

The study concluded that majority of women with CAD has traditional risk factors of myocardial infarction. The findings of the study helped the investigator to develop an instructional module on definition of myocardial infarction, modifiable and non modifiable risk factors, tips to reduce these risk factors, heart healthy diet which will be helpful to the patients to understand about various factors contributing MI and will be helpful in creating awareness regarding the importance of proper compliance to risk reduction measures.

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