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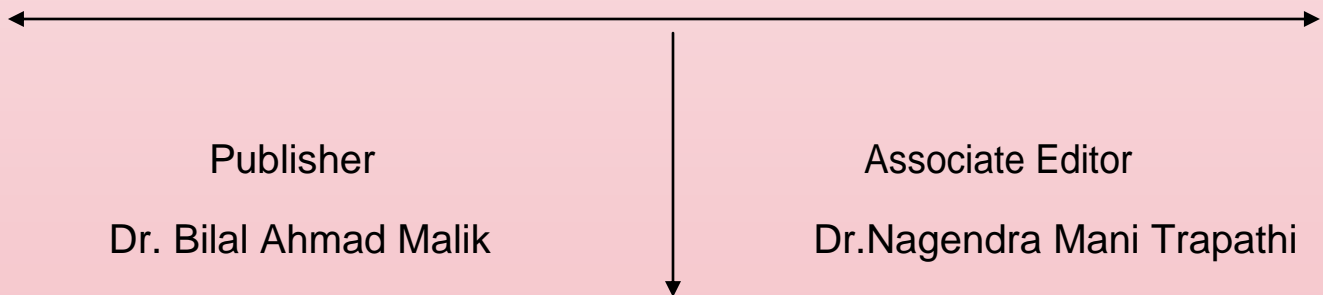
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EFFECTIVENESS OF SECONDARY PREVENTION STRATEGIES ON KNOWLEDGE, PRACTICE AND SELECTED PHYSIOLOGICAL, PSYCHOLOGICAL PARAMETERS AMONG POST MYOCARDIAL INFARCTION PATIENTS IN SELECTED SETTING

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ABSTRACT

A myocardial infarction happens when the flow of oxygen rich blood to a section of heart muscle is suddenly becomes blocked and the heart cannot get Oxygen. 25% of myocardial infarction sufferers die before reaching the hospital, the risk of further myocardial infarction is not to be taken slightly, with 10% death rate in the year after discharge¹. Aim: to assess the effectiveness of secondary prevention strategies on knowledge, practice and selected physiological, psychological parameters among post myocardial infarction patients at selected settings. Methodology: The research approach used in this study was quantitative and the design was true experimental. The sample size was calculated as 20 for study and 20 for control group by block randomization..Results: Majority of the samples (80%) were non vegetarian in study group and control group. in Both group,70% of them were not having the family history of M.I and 20% of them were with the history of second degree relatives suffered by M.I'.

The pre test and post test of knowledge, psychological parameter (stress) and practice in study and control group showed that, The Knowledge among 90 % of study group was Inadequate in pretest and improved to 100%.But the control group majority were moderately adequate in pre and post test. the stress of both groups were moderate in pre test and reduced as mild during posttest in study group and no improvement in control group. In pretest, they were not practicing secondary measures in both groups and during post test only in study group it was improved to fair.

Key words: Myocardial infarction, Secondary prevention strategies, post myocardial infarction patients.

INTRODUCTION

Myocardial Infarction is commonly known as Heart attack, it means interruption of blood supply to the part of the heart causing cells to die. Heart disease affects two third of world population it is a estimation from the

Global burden of disease². By the year of 2020, India may have more individuals with athero thrombotic heart disease than any other regions. A drastic rise in the stressful situations with sedentary life style, food intake with rich high energy and fat, smoking habit and lack of physical activities which are leading to obesity and sharp rise in incidence of MI cases even in developing countries³.

NEED FOR THE STUDY

Acute myocardial infarction (AMI) is frequent and the associated mortality is high in this group. One person dies every 33 seconds owing to a heart attack in India, India is currently witnessing nearly two million heart attacks a year and majority of the victims are youngsters says a top city cardiologist Mehta. In developing countries such as India, cardiovascular disease is a major cause of mortality⁴. It is estimated that 60% of the world's coronary artery disease (CAD) patients are South Asians⁵ who have a high prevalence of CAD risk factors at a relatively young age⁶. Inter heart study reported that standard risk factors such as smoking, abnormal lipids, hypertension, diabetes, high waist-hip ratio, sedentary lifestyle, psychosocial stress, and a lack of consumption of fruit and vegetables lead to more than 90% of acute myocardial infarctions events in South Asians⁷. Reducing morbidity and mortality among post myocardial infarction patients needs implementation of effective secondary measures. Thus the investigator interested to do this study.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of secondary prevention strategies on knowledge, practice and selected physiological, psychological parameters among post myocardial infarction patients at selected setting.

OBJECTIVES OF THE STUDY:

- 1) To assess the pretest, post test knowledge, practice, physiological and psychological parameters in study and control group.
- 2) To evaluate the effectiveness of secondary prevention strategies on knowledge, practice, physiological and psychological parameters among post myocardial infection patients.
- 3) To find out the association between knowledge, practice, physiological and psychological parameters with selected demographic variables in experimental and control group.

RESEARCH HYPOTHESES;

H₁- There will be significant difference between pretest and post test level of knowledge, practice, physiological and psychological parameters among post M.I patients in study.

H₂- There will be significant difference in the level of knowledge, practice, physiological and psychological parameters between the study and control group.

H₂-There will be significant association between mean difference in pre and post test knowledge, practice, physiological and psychological parameters score with their selected demographic variables.

RESEARCH METHODOLOGY

The research approaches used in this study were quantitative and the design was True experimental design.

Setting of the study

The Study was conducted in Asaripallam govt. hospital and follow up was done in their residence in selected villages.

Population: It includes persons who were getting admitted with first episode of myocardial infarction.

Target population

Patients who got admitted with first episode of myocardial infarction.in which the samples were selected with inclusive criteria

Sample size : 40 (20 patients for study and 20 patients for control group.)

Sampling technique

Block randomization technique. Patients were selected for study and control group during every alternative month on the selected hospital.

DATA COLLECTION

Formal permission was obtained from the hospital and the patients. An informed consent was also obtained from the respondents after proper explanation about the purpose and the use fullness of the study and also assurance given about the confidentiality of their respondents.

- 1) Patients were selected for study and control group during every alternative months in the selected hospital by Block randomization technique
- 2) A structured knowledge questionnaire on secondary prevention strategies of myocardial infarction were administered to the patient and pre test knowledge was assessed in both groups.
- 3) The existing levels of practice were administering a practice check list and patients will be asked to maintain a daily activity daily.
- 4) During the hospital stay physiological parameters such as B.P, lipid profile, BMI waist hip ratio were assessed.
- 5) The psychological parameter was assessed using modified stress scale.
- 6) Cardiac rehabilitation and stress reduction techniques were demonstrated to the patients.
- 7) After 1 month the patients were asked to come to the hospital for follow up and post test were done.

For the study group after 5th day on hospitalization Pre test knowledge, practice was assessed. The physiological parameters were assessed and the psychological parameter (stress) was assessed through modified stress scale. They were taught about secondary prevention strategies for 30 minutes and given self instructional module, daily activity diary. After 15 days telephonic reminder about strategies were informed. After 1 month the parameters were checked and post test was done .For the control group pretest knowledge and practice were assessed after the 5th day. Patients were advised to follow the hospital routine and Information and asked to come after 1 month for post test.

FINDINGS OF THE STUDY:

The frequency and percentage of demographic variables states that In age 40% of them were 40-44yrs where as in control group 30% were 50-59 yrs. Both groups were with 80% of males. In occupation 45% of them were semiskilled in study group and 60% in control group. Majority of the samples 80% were non vegetarian in study group and control group. Both group 70% of them were not having the family history of M.I and 20% of them were second degree relatives suffered by M.I. The mean and S.D of pre test and post physiological parameters

like BMI, Blood pressure in study and control group were significantly differed ($p < 0.05$) in control and study group. The blood glucose level and other lipid profiles had not statistically significantly differed in both occasional in control and study group.

Table 1 shows the pre test and post test of knowledge and psychological parameter (stress) practice in study and control group. The Knowledge among 90 % of study group was found to be Inadequate in pretest and improved to 100%. But the control group majority were moderately adequate in pre and post test. The stress of both groups were moderate in pre test and improved as mild in posttest in study group and no improvement in control group. The practicing were not practicing in both groups and in study group it was improved to fair and in control group still they are not practicing.

The Table 2 shows that the comparison of knowledge and practice between study and control group the calculated 't' value of knowledge 4.074 and it was statistically highly significant $p < 0.001$. Regarding practice the calculated 't' value was 3.279 it also shows statistically highly significant.

Table: 3 shows the Comparison of stress (psychological parameter) between control and study groups. It was statistically very highly significant.

Table: 1 Frequency and percentage of pre and post test of knowledge, stress and practice in study and control group

N= 40

Attribute	Category	Score	Study (n=20)				Control (n=20)			
			Pre		Post		Pre		Post	
			No	%	No	%	No	%	No	%
Knowledge	Adequate	75-100	0	0.0	20	100	0	0	1	5
	Moderate	50-75	2	10	0	0	12	60	11	55
	Inadequate	0-50	18	90	0	0	8	40	8	40
	Total		20	100	20	100	20	100	20	100
Stress	Mild	1-10	3	15	19	95	1	5	0	0
	Moderate	11-20	17	85	1	5	19	95	20	100
	Severe	21-30	0	0	20	100	0	0	0	0
	Total		20	100	5	100	20	100	20	100
Practice	Good	25-50	0	0	20	100	3	15	4	20
	Fair	15-25	4	20	0	0	14	70	13	65
	Not	0-15	16	80	0	0	3	15	3	15
	Total		20	100	5	100	20	100	20	100

Table 2
Comparison of knowledge and practice between the study and control groups

N=40

Attribute	Study group (n=20)		Control group (n=20)		Mean difference	't'	df	Sig
	Mean	SD	Mean	SD				
Knowledge	33.4	8.4	20.0	12.4	13.4	4.074	38	P<0.001
Practice	14.4	5.3	7.4	8.2	7.0	3.279	38	P<0.001

Table: 3 Comparison of stress (psychological parameter) between control and study groups.

N = 40

Variables	Control group n=20		Study group n=20		Difference b/w means	“t”	Df	Sig
	Mean	SD	Mean	SD				
Psychological parameter (Stress)	15.8	4.7	7.3	4.0	8.5	15.369	218	P<0.001

DISCUSSION:

The study shows that Knowledge and practice was Inadequate and poor and the secondary prevention strategies helps to improve the knowledge and practice. The (psychological parameter) stress was highly significant between study and control group. The physiological parameters like BMI, Blood pressure in study and control group were significantly differed (p< 0.05) in control and study group. The blood glucose level and other lipid profiles had not statistically significantly differed in both occasional in control and study group. Thus the hypotheses were accepted and supported by Dr. Evangelos Tzolos, Dr. Waleed Mohammad (2016), They done a study on First in a series on myocardial infarction Secondary prevention after MI .Up to 45% of deaths following an MI could be prevented with the correct secondary prevention strategy⁸. Saidi O, et al (2013) study shows that BMI and diabetes increased substantially and there is difference in systolic blood pressure⁹. It has been shown that at least one of four key risk factors—smoking, high blood pressure, high cholesterol or diabetes (mellitus)—

was observed in more than 80–90% of patients experiencing MI, and all of these risks combined account for a population attributable risk >90% for all MI—for men and women in a study done by Tina Gonsalves.¹⁰

CONCLUSION:

Myocardial infarction is an experience with multidimensional impact on various aspects of life of patients. To prevent another episode of myocardial Infarction the secondary prevention strategies help the patients to provide knowledge and what to be practiced after myocardial infarction. Acute myocardial Infarction is recurrent and there may be chances getting another episode within six months from their previous attack. This study helps the patients to be aware and taking care of themselves.

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