To Assess the Effectiveness of Video-Assisted Teaching on Knowledge Regarding Lifestyle Modifications and Drug Regimen in Postoperative Coronary Artery Bypass Graft (CABG) Patients Attending OPD

Savita Pohekar[1], Seema Singh[2], Samruddhi Gujar[3]

[1]Associate Professor, [2]Professor & Principal, [3]Clinical Instructor, Medical-Surgical Nursing Department, Data Meghe Institute of Medical Sciences Deemed to be University, Smt.RadhikabaiMeghe Memorial College of Nursing Sawangi(Meghe),Wardha

Abstract

Background: In patients suffering from coronary heart disease (CHD) after coronary artery bypass grafting (CABG), non-adherence to dietary guidelines, exercise, and prescription medication regimens is a major health care concern worldwide. **Aim of the Study:**To assess the effectiveness of video-assisted teaching on adherence to lifestyle modifications and drug regimen among postoperative coronary artery bypass graft (CABG) patients attending the outpatient department. **Objectives:**1. Assess the knowledge regarding lifestyle modifications and drugregimen among post-operative CABG patients attending OPD.2. Evaluate the effectiveness of video-assisted teaching on knowledge regarding lifestyle modifications and drugregimen among post-operative CABG patients attending cardiac and medicine OPD.3. Associate post-test knowledge score with selected demographic variables of CABG patients. **Material and Methods:** A hospital-based interventional study was used one group pre-test and post-test study design with a Quantitative research approach. This study was conducted among 100postoperative CABGattending outpatient departments of the age group from 55 years to 70 and above in Wardha city of Maharashtra state. The demographic data such asage, sex, educational status, monthly income, dietary pattern and duration after CABGalong with 30 knowledge questionnaire regarding lifestyle modifications and drugregimen in postoperativecoronary artery bypass graftwas obtained using a structured pre-tested questionnaire.Data collected were entered into the Microsoft Excel sheet. The statistical analysis was done using SPSS software. Frequencies and percentages were presented for categorical variables. **Result:** The pre-test findings show that 0-20%had a poor level of knowledge,21-40%had average knowledge,41-60% had good knowledge,61-80 % had very good knowledge. Aftervideo-assistedteaching the post-test scorewas26-50%had average knowledge,51-75% had good knowledgeand76-100 %had very good knowledge, thus it shows that after post-test the knowledge score was increased, applied to find the efficacy of video-assisted teaching't' test was applied and't' value was calculated, The post-test score was considerably higher at 0.05 level than that of pretest score. Hence it indicates that video-assistedefficient teaching.

Conclusion: In general, knowledge of lifestyle changes and drug regimen in post-operative patients (CABG) has been average in the pretest and after video-assisted knowledge of adherence to drug regimen and regulation of lifestyle factors like high fat, high cholesterol diet, obesity, smoking and lack of regular exercise has been increased and understanding of the disease dimension has therefore been generated.

Keywords:*Effectiveness, Video-assisted teaching, lifestyle modification, and post-operative CABG patients*

Corresponding author:
Ms. Savita Pohekar
Address: Smt.Radhikabai Meghe Memorial College of Nursing Sawangi Meghe Wardha
Email:savitaak15@gmail.com

Introduction

Coronary cardiac disease (CHD) is a major cause of global morbidity and mortality.[1][2]In the year 2020, CHD caused 11.1 million deaths, according to the World

Health Organization (WHO) [3]The symptomatic relief and increases life expectancy of CHD patients since 1960 have included Coronary Arteries Bypass (CABG). [4]

CABG was allocated to the American and European Guidelines as a Class-1A indication for multi-ship revascularization.[5]An overall CABG death rate of 3.4 percent was estimated [6] Secondary prevention of CHD and cardiac rehabilitation Patients who have been revascularized are highly necessary to minimize their mortality, and maintain the best possible physical, mental and social well-being.Growing literature has shown that interventions to life style, beneficial modifications to the risk factor and selective use of prophylactic medication scans have decreased the risk of non-fatal and fatal in CHD patients.[7]The importance of dietary improvement, exercise and prophylactic drug therapies is clearly illustrated in existing guidelines.[8]

The individual's dedication remains, however the secret to achieving success in the general public with these guidelines. Compliance, as specified by WHO, is as follows from the accepted guidelines of a health care provider as a person's conduct (take medicine, retain a food and/or enforce change in lifestyles).[9]Compliance with lifestyle procedures and the prescribed drugs that enhance quality of life and happiness are crucial in preventing secondary heart injuries.[10][11]

Non-compliance following CABG is a complex issue and a significant public health problem. It can lead to poor health outcomes and imposes an increased health burden on national economies. It serves as an obstacle to achieving treatment goals and may exacerbate the illness. Despite several years of guidance, a variety of studies have shown that the guidelines and actual clinical practice vary considerably.[12]

Non-compliance has been motivated by a variety of factors: live alone, poor ties between patient and doctor, lack of understanding of the value of adherence, busy schedules, attitudes about practice and treatment, and psychological factors such as anxiety and depression[13][14][15]

The most important factors contributing to drug non-compliance have been the reporting of several daily doses, over cost, forgetfulness and fear of side effects.

[16]

Many studies have documented the prevalence of non-compliance after CABG among CHD patients, linked to lifestyle change and pharmacological care worldwide. Nevertheless, in our part of the world, there is a lack of data concerning non-adherence after coronary revascularization (post-CABG).Moreover, only a few studies have investigated possible food, exercise and substance non-consistency predictors. Given the absolute importance of adherence to CHD and mortality burden in Asia, information on lifestyle and drug regimes modifications in the after-operative bypassing artery graftCABG was the primary objective of this research)[17]

Methodology

Materials and methods: the present study was an interventional study conducted among 100 postoperative CABG patients attending OPD in AVBRHospitals at Sawangi Meghe, Maharashtrastate fromJanuary 2017 to March 2017.The research began after receiving authorization from the Committee of institutional ethical committee (IEC), Datta Meghe Institute of Medical Sciences (Deemed to be University) Sawangi (Meghe), Wardha. Purposive sampling technique was used to select the sample for this study. Based on the extensive review of various interventions, as well as keeping in mind, the cultural settings and resources available, the customized intervention was designed to impart knowledge regarding adherence to the drug regimen and lifestyle modification and this included the following components:

Pretested structured questionnaires were used for data collection. The questionnaire consisted of two parts. Part one consisted of demographic data of Post Operative CABG patients Such as age, gender, education& residential area, qualification, dietary pattern etc..

Part two consisted of 30 questions related to knowledge regarding lifestyle modifications and adherence to drug regimen after CABG surgery, for scoring the knowledge of each participant one score was allocated to each correct answer and zero to the incorrect answer. Furthermore, Patient who has already attended similar types of study and Patient those who are illiterate was excluded from the study.The subjects were

clarified about the study's existence and intent.Written informedconsent was taken from the participants before their recruitment. They had been assured that the data was confidential.

In the Microsoft Excel document, data collected was entered. SPSS software was used to carry out statistical analysis; Frequencies and percentages for categorical variables were provided.

Hypothesis:

H_0: There will be no significant difference between knowledge score regarding lifestyle modifications and drug regimen in postoperative (CABG) patients

H_1:There will be no significant difference between knowledge score regarding lifestyle modifications and drug regimen in postoperative (CABG) patients

Results

Demographic variables .shows that the Majority of 37 % of samples were from the age group of 51-55years,28% of samples were from the age group of 56-60 years. The majority of the 76% samples were males and the remaining24% samples were females. The majority of the31% belong to secondary education, 24% belong to higher secondary, and 18% graduate and above. The majority of subjects 68% of the urban area and the remaining 32% of samples were from the rural area. The majorityof the subjects 36% having monthly income 10001-15000,24% having 9000-10000 and 20% having monthly income 15000-20000 and above.53 % was mix vegetarian and 47 % was vegetarian.45% patients postoperative CABGduration was around 6months to 1 year and 55% patients postoperative period was above 1 year.

Table No. 1:Assessment of existing pretest knowledge regardinglifestyle modifications and drug regimen in postoperative coronary artery bypass graft (CABG)

n=100

Level of knowledge score	Score range	Percentage score	Pre Test	
			Frequency	Percentage
Poor	0-6	0-20%	1	1%
Average	7-12	21-40%	60	60 %
Good	13-18	41-60%	39	39 %
Very good	19-24	61-80 %	0	0 %
Minimum score	6			
Maximum score	18			
Mean score	12.20± 2.225			
Mean %	12.2 %			

Above table No.1 shows that the majority of 60% had average knowledge,39% had good knowledge the maximum score was 18, the mean score was 12.20± 2.22 with a mean percentage score of 12.2 %.

Table No. 2:Assessment of existing pretest knowledge regardinglifestyle modifications and drug regimen in postoperative coronary artery bypass graft (CABG)

n=100

Awareness score level	Range of score	Score of percentage	Post Test	
			Frequency	**Percentage**
Poor	0-6	0-25%	0	0 %
Average	7-12	26-50%	0	0 %
Good	13-18	51-75%	35	35 %
Very good	19-24	76-100 %	65	65%
Minimum score	15			
Maximum score	22			
Mean score	18.88 ± 1.499			
Mean %	18.88 %			

The above table no.2 shows that of the sample were had a poor level of knowledge score, none of them had a poor level of knowledge score, none of them had an average level of knowledge, 35(35 %) of them had a good level of knowledge score, 65(65%) have a very good level of knowledge. The minimum score was 15 and the maximum score was 22, the mean score was 18.88 ± 1.499 with a mean percentage score of 18.88 %.

Table No. 3: Effectiveness of video-assisted teaching on knowledge regarding lifestyle modifications and drug regimen in postoperative coronary artery bypass graft (CABG)

n = 100

Tests	Mean score	SD	't'-value	Degree of Freedom	p-value	Significant
Pre Test	12.20	±2.225	29.911	99	0.001	S, p<0.05
Post Test	18.88	±1.499				

The table No.3-Shows that there is a significant difference between pretest scores and posttest scores of knowledge interpreting the effectiveness of video-assisted teaching on knowledge regarding lifestyle modifications and drug regimen in postoperative coronary artery bypass graft (CABG)

The mean value of pretest is 12.20 and the posttest is 18.88 and a standard deviation value of pretest is 2.225 and the posttest is 1.499. The calculated t-value is 29.911 and the p-value is 0.001.

It is therefore interpreted statistically that the video-assisted teaching on knowledge regarding lifestyle modifications and drug regimen in postoperative coronary artery bypass graft (CABG) was effective. Thus the H_1 is accepted and H_0 is rejected in this study.

Table No. 4:Association of post-test knowledge score with selected demographic variables.

n=100

Demographic variables	Frequency	Percentage score%	Mean posttest knowledge score	F-value/ t-value	p-value
Age of parents in the year				F-value	
55-60	12	12	18.95± 1.618		
61-65	23	23	19.46±0.884	1.957	0.126 NS, p>0.05
66-70	37	37	18.61±1.576		
70 years and above	28	28	18.33±2.517		
Gender				t-value	
Male	76	76	18.85 ± 1.624	6.376	0.13 NS, p>0.05
Female	24	24	18.96 ± 1.138		
Residence				F-value	
Urban	68	68	18.77 ± 1.505	0.041	0.040 S, p<0.05
Rural	32	32	18.98 ± 1.502		
Educational status				F-value	
Primary education	27	27	19.06± 1.417		
Secondary education	31	31	18.56±1.944	6.758	0.05 S, p<0.05
Higher secondary	24	24	18.70±1.252		
Graduation and above	18	18	18.58±1.499		
Monthly income of the family				F-value	
9000-10000	24	24	18.70± 1.129		
10001-15000	36	36	18.74±1.643	1.578	0.200 NS, p>0.05
15001-20000	20	20	19.00±1.541		
20000 and above	20	20	18.88±1.499		
Dietary pattern				t-value	
Vegetarian	47	47	18.91 ± 1.502	0.035	0.851 NS, p>0.05
Mix	53	53	18.40 ± 1.517		
Duration after CABG					
6months -1 year	45	45	17.81 ± 1.502	t-value	0.743 NS, p>0.05
Above 1year	55	55	18.23 ± 1.517	0.335	

Table No. 4 shows how knowledge scores are associated with age, gender, monthly income and dietary pattern of samples was not statistically significant. The association of knowledge score was shown significantly to the demographic variable such as education and residence.It shows that integrating knowledge scores with the area of residence. The 'F' was calculated 0.041 at a 5% level of significance with df 98. Calculated value of 'p'=0.040 which was greater than the acceptable significance level, i.e.' p'=0.05.So it is perceived that the residential area of samples wasassociated with its scores of knowledge.

It demonstrates that the awareness scores are correlated with the education. The 'F' value was calculated 4.15 at a 5% level of significance with df 3 (97). Also the calculated 'p'

value is 6.758 that was more than the appropriate significance point i.e. 'p'=0.05.So it is perceived that education of parents associated with their knowledge scores.

Hence it is concluded that video-assisted teaching significantly brought improvement in the knowledge regarding lifestyle modifications and drug regimen in postoperative coronary artery bypass graft (CABG) patients.

Discussion

The research findings were addressed with regard to the study's objectives and the results of other studies in this section.This research was carried out to assess the efficacy of video assisted teaching on knowledge concerning the changes in lifestyles and the regimen of drugs for OPD patients after surgery coronary artery bypass graft (CABG)."The subjects in this study expressed an understanding of the seriousness of their medical condition— CAD. Among the reasons they consented to CABGS was a deterioration in the overall quality of their lives— expressed as a decrease in their functional ability; inability to perform job/family roles; angina symptoms/ feelings of illness; and a perceived option to the threat of a possible M.I., or imminent death. a crisis of an M.I or the urgent need for CABGS for unstable angina, or Left Main coronary disease, existed for most of the subjects in this study, even though subtle prodromal warning symptoms were present for many

of them. To cope with the stressful situation of their anticipated CABGS and hospital recovery, the subjects expressed a belief in the hospital medical system, their expectations of a good outcome, and the support of their family and friends.

Identified "means of coping" of the present study groups included: family/friend support; religious beliefs; a positive attitude; pets; others with a heart condition/ or who had a CABGS; and work/hobbies/or sports. Similar "means of coping" were found in other studies of cardiac patient population groups (Kandheria U, Townsend K, Erickson SR, et al.)[18]Recommendations from the majority of these studies highlight the necessity to identify and provide counseling and guidance to those individuals whose "maladaptive" coping responses may lead to poor recoveries.

All of the subjects expressed an understanding of the limitations of their CABGS, i.e., it is not a curative treatment measure, and that lifestyle risk reduction behavioral changes were necessary to control their CAD and to maintain their overall QOL. Lifestyle behavioral changes (e.g., diet, exercise, stress reduction, etc.) often began within weeks of discharge from the hospital after CABGS, as evidenced by the Group

Most of the subjects reported that maintenance of a "cardiac healthy diet" was the most difficult part of their medication compliance.

The busy life of a patient contributes to the inability to perform physical exercise is a fascinating fact.Patients find it difficult to make time after an already hectic day because exercise takes a minimum of half an hour. However if time in certain situations isn't a limitation, exercise will make them exhausted because of which they are reluctant to start.CABG: CAB Furthermore it has also been documented that there are consistent "narrowness" and the reproaches of the partners in cases of exercise slacking or dietary discipline. In addition (Khanderia et al).In this study after providing video-assisted teaching the patients gain more knowledge about their disease aspects and the importance of adherence to the drug regimen and are to maximize coping with the "environment. Simplifying instructions or take down a patient's prescription doing the right dose on time would essentially make it easier for the patient [19]

Limitations:

The study findings must be interpreted with the knowledge that data were collected from a small purposive sample of CABGS patients.

Our analysis also has a downside because the study sample represented a small population selected by purposeful samples and the subjects were recruited from a single tertiary care hospital in Wardha City. More comprehensive research in a broader geographical region covering more tertiary hospitals to help draw conclusions

Conflicts of Interest: Nil

Conclusion

It can be argued that failure to accept improvements in lifestyle and medicine is an emerging phenomenon worldwide.Despite the importance of secondary preventative measures, changes in patient behavior are still insufficient with heart disease due to sedentary behaviours and unhealthy diets in our days. Recognizing and addressing these predictors is important for the skilled health practitioners.

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