EFFECTIVENESS OF CARDIAC TEACHING PROGRAM ON PATIENTS WITH ACUTE MYOCARDIAL INFARCTION [+]

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Abstact

Objective: To evaluate the effectiveness of cardiac teaching program on patients with acute myocardial infarction (AMI) during the first stage of rehabilitation.

Design: A quesi experimental .

Method : Using pre-post tests approach.

Results: The results reveal that there is signficant increase in knowledge in the study group in the items of understanding definition of MI,risk factors and the worning signs and symptoms of complications .

Conclusion: Teaching program is effective in increasing knowledge about myocardial infarction .According to the results the investigator recommended that further research should be carried out on larger sample for a longer period to determine the effectiveness of cardiac teaching program for all patients with AMI as soon as possible after admission and follow up.

المستخلص

الهدف :تقويم تاثير البرنامج التعليمي على المرضى المصابين باحتشاء عضلة القلب في المرحلة الاولى من التاهيل

المنهجية:استعمال الاختبار القبلي والبعدي .

النتائج : اشارت النتائج الى وجود تاثير في معلومات المجموعة المدروسة من حيث معرفتهم بتعريف احتشاء العضلة القلبية، العوامل المسببة للمرض ، والعلامات والاعراض التي تنبيء بالمضاعفات.

الخلاصة: البرنامج التعليمي يؤثر على زيادة معلومات المرضى بشأن احتشاء العضلة القلبية وبناء على النتائج اوصت الباحثة بالاستمرار في اجراء بحوث اخرى على عينة اشمل ولفترة طويلة للتعرف على تاثير البرنامج التعليمي على المصابين باحتشاء عضلة القلب الحاد حال دخولهم للمستشفى ومتابعتهم في العيادات الخارجية.

Introduction

Life style readjustement in the home during recovery period after myocardial infarction (AMI) presents challenges for patients and their families that often must be faced with minimal assistance from health professionals , a lthough it is well recognized that cardiac rehabiltation is a process characterized by the four phases of

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acute care , hospital recovery,convalsence at home and resumption of normal activities [1].The program is intended to place emphasis on the first stage of rehabilitation.The nurse has an important role in the prevention,treatment and cardiac rehabilitation because she spends more time with patients including helping them to carry out daily living activities, exercises and teaching rehabilitation about myocardial infarction , its risk factors and prograssive activity [2].

The objective of our study is to evaluate the effectiveness of cardiac teaching program on patients with acute myocardial infarction during the first stage of rehabilitation

Methodology

A quesi experimental design using pre-post test approach was conducted at Coronary Care Unit in Al-Kadhmia Teaching Hospital during the period from July to September 1997 . The specific criteria for inclusion were:

1-First attack of MI at least 24 hours after admission
2-Patients who have willingness to participate in the study
3- Adult patients with age from 30-70 years
4- Families are encouraged but are not required to participate in the study
5- The permission of their attending by cardiologisit

The patients who are excluded from the study are those who are unable to communicate in Arabic ,or disoriented to time or those with speech impairment on an individual basis and patients with a psychiatric history and those who were too ill to complete the interview were also excluded from the study , and those with persistant anginal pain and rhythm disturbances and who did not responed to the medical treatment.

An educational program was carried out by the investigator who provided pre and post tests. A pre test was set to find out how much the patient actually knew about his disease and his self care to determine his need in adjusting his daily activities .A post test was done before discharge from the hospital.The test scores may range from wrong or correct answers .Time for each pre and post tests was 20 minutes.

Preparation of the educational program was through reviewing of related literature by using interviewing formate prepared specially for this purpose and sending the educational program to 6 experts to gave their opinion about main topics .Finally ,the educational program was made of the following items: definition of MI, causes of MI,life style changes,drugs and diet therapy,modification of risk factors, the warning signs and symptoms of complications ,when they consult their physcian and importance of continuing medical contact.

After the patient had been examined by a special doctor and his condition stabilized and he had fulfilled the criteria for the study ,24 hours after the uncomplicated MI ,the investigator met the patient to get information about him .Most of the patients were discharged from the hospital on the 6^{th} to 7^{th} days after AMI.

The individual discussion in this study was held on a daily basis with an investigator who spent 2 sessions per day in general , duration of each session was 30 minutes.

Validity of knowledge test .An investigatore at one of the study institutions was able to validity that the content of the kowledge test questions met the objective of the cardiac teaching program. Reliability coeffcientwas 0.87 that was statistically acceptable .

Statistical Analysis

Percentage was used to calculate the description of the sample.Mean and Standared deviations were computed to estimate the value of the data,and t-test was used to determine the differences between the pre and post tests .Kolmogrove Smirnove used one –sample test to determine the signficant differences between pre and post tests.

Results

Table –1- Characteristics of the sample

Variables	Study group	
	No	%
1-Age		
36-40	2	10
41-45	1	5
46-50	2	10
51-55	1	5
56 and above	14	70
Total	20	100
Mean age	54.5	
2-Sex		
Male	11	55
Female	9	45
Total	20	100
3- Level of education		
Illiterate	11	55
Read and write	2	10
Primary	2	10
Intermediate	2	10
Secondary	2	10
University	1	5
Total	20	100
4-Occupationt		
Government	2	10
Retired	4	20
House wife	6	30
Others	8	40

Total	20	100

Table –2-Comparative statistic significant (X,SD,t-test) for knowledge test between pre and post tests in patients with AMI

Knowledge test	**Study group N= 20**		**t-test**	**C.S**
	X	**SD**		
Pre-test	4.8	2.13	3.16	S
Post-test	16.7	3.5		

Table –3- Comparasion of evaluation of the items for educational program in pre and post tests on patients with AMI

Items of educational program	**Pre-test**		**Post-test**		**C.S**
	F	**%**	**F**	**%**	
1- understand definition of MI	1	5	11	55	H.S
2- understand causes of MI	8	40	20	100	H.S
3- understand appropriate life style changes	4	20	20	100	H.S
4- understand drugs therapy	7	35	18	90	H.S
5- understand diet therapy	6	30	11	55	H.S
6- understand modification of risk factors	6	30	19	95	H.S
7-The worning signs and symptoms of complications	5	25	18	90	N.S
8-When they consult their physician	5	25	14	70	H.S
9- understand importance of continuing medical contact	2	10	20	100	H.S

Results and Discussion

It is apparent that learning about the medical regimen is a fundamental necessity for the patient to be able to paticipate in his own care.This study demonstrated that patients are capable of learning during the early recovery about

their educational program..Table (1) shows that the characteristics of the sample ,regarding age ,the highest percentage 70 of the patients are age 56 years and above the mean age is 54.5 years .This indicates that myocardial infarction occurs around this age (middle age) which is reported by[3,4].

Myocardial infarction occurs in middle age group because they have stress due to many responsibilities with their families and with their works and because of the occurrence of other risk factors like diabetes mellitus and hypertension in this age group.Concerning the sex ,the majority of the sample are male (55%).For the level of education 55% of the sample are illiterate .This results is simillar to that found by British office of health[5] economic 1987 ,the data in Table 2 indicate that there is a signficant difference increase in knowledge in post test when analysis was made by using t –test .These results agree with [3,6] who states that patients continue to gain knowledge after series of discussion involved in cardiac rehabilitation .It has been shown that the education of the patient positively influence the behavior of the patients on teaching program. Our study shows that comparison evaluation of items in pre and post tests in patients with AMI (Table 3),5% of patients in pre test and 55% of patients in post test understand definition of MI,20% of patients in pre test and 100% of patients in post test understand appropriate life style changes,10% of patients in pre test and 100% of patients in post test understand importance of continuing medical contact,30%of patients in pre test and 95% of patients in post test understand modification of risk factors, 35%of patients in pre test and 90% of patients in post test understand drug therapy .These results show that there is highly signficant difference increase in knowledge in understanding definition of MI . Appropriate life style changes,importance of continuing medical contact, modification of risk factors, drug therapy, when data are analyzed by using Kolmogorve Smirnove test .These results indicate that cardiac teaching program is effective in improving knowledge about MI and its treatment to the patients in this study .These results came in agreement with findings of others such as[7 and 8] who concluded that there is early phase of cardiac rehabilitation which provides an opportunity for patient education and coronary risk factor modification with exercise training. Other studies[8,9] found a familiarity with facts about coronary disease is necessary for the patient to understand the recommendations for care.

Learning Difficulties

The name and action of the medication appeared most difficult for patient to learn.The investigator found that these patients had relatively little difficulty in learning causes of MI and modification of risk factors,however ,they found difficulty in learning the warning signs and symptoms of complications .The investigator found that not all patients could learn as much as about their rehabilitation program given that only three out of 20 patients were improved 100%.It was concluded that it is unrealistic to expect 100% improvement .In most patients ,it is ,however realistic to expect the majority to show enough improvement to be able to learn their rehabilitation program safely .

The investigator observed that the patients degree of motivation appeared particularly important.Five illiterate patients who seemed eager to learn rehabilitation did extremely well on their post test in comparison to their pre test .The presence of family members during teaching sessions appeared to help

motivate patients and reinforce teaching Often family seemed as eager to learn as did the patient .

A nurse educator would be better able than outside researchers to select times when a patient indicated interest and is free from distructions because she spends more time with patients than any other of the health team.

It was concluded that cardiac teaching program is effective in improving knowledge about MI and its treatment to the patient in this study .Based on these results the investigator recommended that further research should be carried out on larger sample and for longer period to determine the effectiveness of cardic teaching program on patients with AMI in hospital and discharge when the patient starts to go back to normal life style.

References

1-Bile,D "A study of patients' knowledge in relation to teaching format and compliance" Supervisor Nurse, March,P.P.55-62 ,1977

2-Good ,W and Bonita ,A " Home Cardiac Rehabilitation for congestive heart failure .A nurse case management approach "Rehabilitation Nursing , Vol .24, No.4 ,.P.P. 143-145,1999

3- Guzzetta ,C:Cardiovascular nursing ,holistic practice ,Philadelphia ,1992

4-Dodu,S: Coronary heart disease in developing countries,the threat can be averted .W.H.O Chron, Vol.38 ,No.1 ,P.P.3-7 ,1984

5- British Office of Health Economic Coronary heart disease ,the need for action .White Hall, London,Swia ,2Dy,April 12,.P.7,1976

5-Good ,W and Bonita "A Home Cardiac Rehabilitation for congestive heart failure .A nurse case management approach "Rehabilitation Nursing ,Vol. 24,No.4 ,.P.P. 143-145,1999

6-Vincent P" Factors influencing patients non compliance : A thoretical approach "Nurse Research Vol.20,N.o 1,P.P 511-6,1971

7- Fletcher, G "Rehabilitative exercise for the cardiac patient. Early phase" Cardiol-Clin. Vol.11 No.2 P.P. 267-75 ,1993

8- Levy , J "Standard and alternative adjunctive treatments in cardiac rehabilitation." Tex-Heart-Inst-J. Vol. 20 No.3 ,198-212,1993

9- Petrie K ;Wainman J ;Sharp N;Buckley J "Role of patients' view of their illness in predicting return to work and functioning after myocardial infarction : Longitudinal study " BMJ,Vol.11,No.312 P.P.1191-4 ,1996