Assessment of Physical Activities And coping for Myocardial Patients

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Abstract

Objectives:-

A descriptive study was carried out to identify the patient's physical activity with myocardial infarction modification and behavioral intervention to adapted for new life style after discharge.

Methodology:-

The sample consisted of 56 adult patients with myocardial infarction after discharge from Baghdad Teaching Hospital and Ibn Al-Betar Teaching Hospital from February 2006 – February 2007.The questionnaire tool consisted of two parts, demographical data and items related to patient modification activities during convalescence and regimen of physical conditioning. Questionnaire tool consisted of 20 items and was tested for its validity and reliability by a panel of experts in College of Nursing. Descriptive and statistical procedures were used to analyze the data.

Results :-

The results of the study showed that the majority were male , married, the duration of illness was from 1-5 years ,also this study represent that the patients suffered from myocardial infarction were have lack in knowledge related to early physical activity and rehabilitation program for heart, move over the study were founded the patients have many restriction in the walking, commitment to reducing weight, refection and reference to doctor when sign of chest pain, and leg edema appears on patient   .

Recommendation :-

The research recommended to to present complete rehabilitative education programs to myocardial patient with their families after to discharge this program consist of the most important physical activities behavioral changes in life style, practicing their jobs and back to components also to offer an illustrated panflict or lectures with spical educational aids in a special professional centers to reduce mortality rate and early detaction of disease .

Introduction

Acute myocardial infarction affects hundred of thousands of people each year. Around a quarter die, half of them before reaching a hospital.

Survivors are at increased risk of recurrent myocardial infarction or cardiac death rate, with 10% death rate in the first year after discharge and subsequent annual death rate of 5%. [1]

Cardiac rehabilitation as a whole is aimed to improving the cardiac patients quality of life through the reduction of risk factor for cardiac disease. Opinions have differed over how much exercise is needed for this beneficial effect, with cardiac patients, it is crucial to find leisure activities, occupational activities, and ADLs that are safe and performed regularly by an individual patients, these activities will be different in terms of type and intensity for different patients. [12]

Myocardial infarction refers to the process by which areas of myocardial cells in the heart are permanently destroyed and resulting atherosclerosis. [3] It is often useful to reassess patients 8 – 11 weeks following myocardial infarction prior their return to work. This is especially important in the patient with risk stratification early post discharge which require immediate consideration and aggressive therapy.[4]

Holoway mentioned that clients require close supervision and monitoring during the first 2 – 3 months after discharge. In this phase clients and families experience, The greatest adjustment. They are vulnerable to experience a great deal of anxiety about the types and amounts of activities, develop fears and depressions, misinterpret instructions about medications or regimens, and encounter problems with instituting life style changes such as preparing diets, stopping smoking, or managing stress. By 6 months following hospitalization, clients and families have begun to recognize that exercise, self monitoring, and life style changes are life long goals. At the same time they can reconstruct their lives within the parameters of the clients condition and abilities. [5,6]

Throughout all phases of rehabilitation the goals of activity and exercise tolerance are achieved through gradual physical conditioning, aimed at improving cardiac efficiency over time. Cardiac efficiency is achieved when work and activities of daily living can be performed at lower heart rate and lower blood pressure, thereby reducing the hearts oxygen requirements and reducing cardiac over load. [7]

Methodology

A descriptive design was carried through out the present study for the period 1st of Feb. 2006 to the 1st of Feb. 2007. The data were collect from out patient at Baghdad Hospitals in Iraq presented as Ibn-El-Betar, and Baghdad Teaching Hospitals. Purposive samples of 56 patients with myocardial infarction after discharge were selected through a non probability sampling techniques from out patient clinic.

The questionnaire is consisting of two parts:

1. Demographic data sheet consisted of 6 items which include: age, gender, marital status, level of education, duration of illness and occupational status.

2. The specific questionnaire to assess patients' self- care with myocardial infarction and this part which included two sections:

   a. Patient's activity modification during rehabilitation to reach complete care and this consisted of 11 items.

   b. Patient's program during rehabilitation period for further time to increase the activity and physical mobility and this section consisted of 9 items.

   All items of part two were measured on Likert scale, always (3), never (1). The cut off point of mean of scores of all items was (2). Validity of the instrument was determined through a panel of 6 experts. The reliability of the questionnaire was determined (r=0.85) which was adequately reliable.

   Data was collected from 1st of Feb. 2006 to the 1st of Feb. 2007 by interviewed techniques used. Data was submitted to statistical analysis which includes the percentage, frequencies, mean of score (MS) and chi-squire test.

Results:

Table (1): **Socio-demographic Characteristics of the Study Sample.**

Variable	Frequency	%
1. Age/ Years		
40 – 49	18	32.2
50 – 59	12	21.5
60 – above	26	46.3
Total	56	100
2. Gender		
Male	30	53.6
Female	26	46.4
Total	56	100
3.Marital Status		
Single	8	14.3
Married	38	67.8
Widowed	10	17.9
Total	56	100

Variable	Frequency	%
4. Level of education		
Illiterate	6	10.7
Read and Write	10	17.9
Primary School	22	39.3
Intermediate School	4	7.1
Secondary School	4	7.1
College	10	17.9
Total	56	100
5. Duration of Disease/ years		
1 – 5	30	71.42
6 – 10	10	17.8
11 – 15	16	10.78
Total	56	100

This table indicated that the majority of the study sample of those (60 – above) years old and they were accounted (46.3%) the mean age of patient was 49.5 ± 20.06 and were male (53.6%) most of - them were married (67.8%) and their level of education were primary school (39.3%),duration of disease per years was the most for 1-5 years percentage was (71.42%)

Table (2): **Myocardial infarction patient's responses for activity modification during rehabilitation period.**

No	Items	Always		Sometimes		Never		M.S
		F	%	F	%	F	%	
1.	Patient avoids any activity that produces chest pain, dyspnea, or undue fatigue.	48	85.7	-	-	8	14.2	2.71
2.	Avoids extremes of heat and cold and walking against the wind.	24	42.8	2	3.5	30	53.5	1.89
3.	Loses weight as directed.	22	39.2	4	7.1	30	53.5	1.85
4.	Stops smoking.	42	78.5	4	3.5	10	17.8	2.6
5.	Alternates activity with rest periods. Some fatigue is normal and expected during convalescence.	32	57.1	4	7.1	20	35.7	2.21
6.	Eats 3 or4 meals daily, each containing the same amount of food.	32	57.1	4	7.1	20	35.7	2.21
7.	Avoids large meals and hurrying while eating.	28	50	2	3.5	62	46.4	2.03
8.	Restricts caffeine – containing beverages, because caffeine can affect heart rate, rhythm, and blood pressure.	32	57.1	6	10.7	18	32.1	2.25
9.	Complies with prescribed diet, modifying calories, fat, and sodium as prescribed.	42	75	2	3.5	12	21.4	2.53
10.	Makes every effort to adhere to medical regimen, especially in taking medication.	48	85.7	4	7.1	4	7.1	**2.78**
11.	Pursues a pleasurable hobby that affords release of tension.	20	35.7	6	10.7	30	53.5	1.82

No. = Number, F=Frequency, %= Percentage, M.S= Mean of Score

Table 2:   the results indicated that the myocardial patients adherence to medical regimen only, taking medication without participation in cardiac rehabilitation program.

Table (3): **Myocardial infarction patient responses for post rehabilitation activity program.**

No.	Items	Always		Sometimes		Never		M.S
		F	%	F	%	F	%	
1.	Walks daily, increasing distance and times as prescribed.	28	50	-	-	28	50	2
2.	Monitors pulse during physical activity until the maximal level of activity is attained.	18	32.1	2	3.5	36	64.2	1.67
3.	Avoids activities that tense the muscles: isometric exercise, weightlifting, any activity that requires sudden bursts of energy.	36	64.2	-	-	20	35.7	2.28
4.	Avoids physical exercise immediately after a meal.	20	42.8	-	-	36	57.1	1.85
5.	Shortens work hours when first returning to work.	42	75	4	7.1	10	17.8	1.07
6.	Participates in a daily program of exercise that develops into a program of regular exercise for a life time.	20	40	2	3.5	14	25	2.46
7.	Notifies physician when the following symptoms occur.	47	82.1	-	-	9	17.8	2.46
8.	Shortness of breath.	31	78.5	4	3.5	20	17.8	**2.6**
9.	Swelling of feet and ankles.	28	78.5	2	3.5	26	17.8	**2.6**

No. = Number, F=Frequency, %= Percentage, M.S= Mean of Score

Table 3 presented that the responses of myocardial patients related to shortness of breathing and swelling of feet and ankle were high mean of score (2.6). For post rehabilitation activity program.

Table (4): **Significant differences between the educational level and age group regarding to physical activities and coping**

Age / Educational level Of patients	physical activities and coping						Total	
	< 40		40 – 49		50 - 60			
	F	%	F	%	F	%	F	%
Illiterate	-	-	-	-	6	10.7	6	10.7
Read and Write	4	7.1	2	3.6	4	7.1	10	17.9
Primary	3	5.4	9	16.1	10	17.9	22	39.3
Intermediate	-	-	1	1.8	3	5.4	4	7.1
Secondary	4	7.1	-	-	-	-	4	7.1
Graduated	4	7.1	3	5.4	3	5.4	10	17.9
Total	15	26.8	15	26.8	26	46.4	56	100
	Value		df		Asymp. Sig. (2-sided)		P≥0.05	

Pearson Chi-Square	24.883	10	.006	H.S.

No. =Number, df=Degree of freedom
F=Frequency, %= Percentage

Findings of table 4 revealed that there were highly significant between level of education and age regarding to physical activities and coping of patients

Table (5): **Significant differences between the gender and age group regarding to   physical activities and coping**

Age Gender	physical activities and coping						Total	
	< 40		40 – 49		50 - 60			
	F	%	F	%	F	%	F	%
Male	11	19.6	11	19.6	8	14.3	30	53.6
Female	4	7.1	4	7.1	18	32.1	26	46.4
Total	15	26.8	15	26.8	26	46.4	56	100
	Value		df		Asymp. Sig. (2-sided)		P≥0.05	
Pearson Chi-Square	10.146		2		.006		H.S.	

No. =Number, df=Degree of freedom

This table indicated that there were highly significant between gender and age regarding to physical activities and coping of patients

Table (6): **significant differences between duration of disease and age group Regarding to Physical activities and coping**

Age Duration of Disease	physical activities and coping						Total	
	< 40		40 – 49		50 - 60			
	F	%	F	%	F	%	F	%
1 – 5 Years	15	26.8	11	19.6	14	25	40	71.4
6 – 10 Years	-	-	1	1.8	9	16.1	10	17.9
11 – 15 Years	-	-	3	5.4	3	5.4	6	10.7
Total	15	26.8	15	26.8	26	46.4	56	100
	Value		df		Asymp. Sig. (2-sided)		P≥0.05	
Pearson Chi-Square	13.497		4		.009		H.S.	

No. =Number, df=Degree of freedom

Table 6 presented that there were highly significant between duration of disease and age of patients regarding to physical activities and coping.

Table (7): **Significant Differences between marital status and age group Regarding to Physical activities and coping**

age / Marital Status	Physical activities and coping						Total	
	< 40		40 – 49		50 - 60			
	F	%	F	%	F	%	F	%
Single	4	7.1	4	7.1	-	-	8	14.3
Married	7	12.5	10	17.9	21	37.5	38	67.9
Others	4	7.1	1	1.8	5	8.9	10	17.9
Total	15	26.8	15	26.8	26	46.4	56	100
	Value		df		Asymp. Sig. (2-sided)		P≥0.05	
Pearson Chi-Square	10.299		4		.036		S.	

No. =Number, df=Degree of freedom F=Frequency, %= Percentage

Table7 indicated that there were significant differences between marital status and age regarding to physical activities and coping of patients

Discussion

The result of the study indicated that the majority of the study sample was 46.3% at age of above 60 years old; they were male 53.6% and married 67.8% with level of education primary school 39.3%, got the duration of disease 1-5 years as showed in (table 1).

This result agreed with[1] who stated that, the non-modifiable risk factor of myocardial infarction are, family history of coronary artery disease, increasing age, gender (heart disease occurs three times more often in men than in women).

Cardiac rehabilitation aimed to improving the cardiac patients quality of life, this fact are not applied as the results in(table 2) presents myocardial patients adherence to medical regiment only mean of score 2-78 and avoids any activity that produce chest pain,dyspnea,or undue fatigue 2.71

This result stated in (8), who indicated that participation in cardiac rehabilitation after myocardial infarction (MI)has been shown to improve survival, decrease the risk of recurrent of (MI)and improve exercise capacity in addition to the physical benefits of cardiac rehabilitation, participants have also been shown to experience psychosocial benefits including improved self-reported physical function ,less depression, anxiety and self control, these benefits found among both sexes and all ages .

Also (Table 3) presents 2.8 a high mean of score to avoid any activity , such as isometric exercise , while low mean of score 1.07 to item of return back to work with decreasing work hours , besides 2.6 mean of score to item notify the doctor for shortness of breath , or swelling of feet occurred ,this result indicating lack of knowledge of physical activity and coping of the MI .patients.

 This result supported by (10) ,the patient and family members are supported and encouraged to ask questions ,so that information can be clarified and understanding enhance.

Moreover the study showed a significant differences between level of education patients at primary school 39.3% with physical activities and coping assessment, that indicated low level of education were more dependent and need more education in cardiac rehabilitation while the results indicated that the myocardial patients avoids any activity that produces chest pain 85.7% as showed in (table 4) also 85.7% of the study sample adhere to medical regimen only, taking medication and eats 3-4 meals daily without participating in any type of cardiac rehabilitation program which changes life style, makes physical activity gradually in a safe way to reduce risk factor of sudden death.

The cardiac rehabilitation program directly target cardiac misconceptions , reductions in psychological distress , physical limitations , reported angina and associated use of reliever drug have been reported , as have-self reported increase in daily walking , dietary changes , reduce of hospital readmission (9)

There is highly significant association between gender and age groups , regarding physical activity and coping P = 0.05 , as showed in (table 5) .

Also there was significant association between duration of disease and age group regarding physical activity , that indicating the old age less participate in exercise and physical activity .as presents in (table 6) .

Regarding sample response to increased activity and mobility during rehabilitation period, 82.1% of the sample indicated notifies physician when symptoms such as shortness of breath or simple ankle swelling occurs, and 64.2% of them avoids any activity that tense the muscle, only 40% of the study sample participate in a daily program of exercise that develop into a program of regular exercise for a life time. As showed in (table 7).

Based on the finding of the study, the maximum of the myocardial infarction patients lacking knowledge in rest-activity balancing and no adopted enough to the new preparation in their life-style modification. The

physical conditioning is achieved gradually, patients are observed for chest pain and palpitation, are instructed to stop exercise if any of symptoms develop, monitored for an increase in heart rate above the target heart rate, an increase in systolic or diastolic blood pressure more than 20 mm/ Hg.[7]

Recommendation

1. Provide specialized out – patient clinic for myocardial infarction patients to offer them with a complete follow – up. program
2. Provide patients with panflict to orient them and family with a knew modification in Physical activity and treatment regimen.

3-Provide an educational program throw mass media to educate the cardiac patients the importance of cardiac conditioning.

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الخلاصـة:

الهدف: دراسة وصفية أجريت للتعرف على النشاط الجسمي للمرضى المصابين بالجلطة القلبية وتكيف المريض مع المرض في نمط حياته الجديدة بعد خروجه من المستشفى.

إجراءات البحث : شملت عينة البحث 56 مريض مصاب بالجلطة القلبية بعد خروجه من المستشفى. جمعت العينات في مستشفى بغداد التعليمي ابن البيطار التعليمي(العيادات الخارجية) للفترة من شباط 2006 إلى شباط   2007 و شملت الدراسة من محورين:

المحور الأول : المعلومات الديموغرافية للمريض .

والمحور الثاني : التغييرات في نشاطات المريض الجسمية والحركية خلال فترة النقاهة والتزام المريض بالتكييف الجسمي وتكونت من عشرين فقرة وتم اختبار صدق الأداة بعد عرضها على الخبراء ضمن الاختصاص واستخدمت الباحثة الإحصاء التحليلي والاستدلائي   لغرض تحليل البيانات .

النتائـج :

أهم النتائج التي حصلت عليها الباحثة هي إن معظم أعضاء العينة هم من الرجال المتزوجون ومدة الإصابة لهم 1– 5 سنوات وأظهرت الدراسة أيضا أن المريض المصاب بالجلطة القلبية تنقصه المعرفة عن أهمية الحركة الجسمية المبكرة والنشاطات التأهيلية للقلب وتقليل مخاوف المريض من النشاطات الجسمية في المشي الالتزام بتقليل الوزن وتحديد وجبات الطعام ومراجعة الطبيب عند حدوث الم في الصدر وضيق التنفس وتورم القدمين.

التوصيـات:

أوصت الباحثة بالعمل على تقديم برامج تأهيلية وتثقيفية متكاملة لمرضى الجلطة القلبية مع عوائلهم بعد خروجهم من المستشفى حيث يتضمن البرنامج أهم النشاطات الجسمية والتغيرات السلوكية في نمط الحياة وممارسة العمل الوظيفي والرجوع إلى المجتمع . والعمل على توفير كراريس مطبوعة ومصورة أو على شكل محاضرات مزودة بنشرات توضيحية لغرض الاستفادة

القصوى من البرنامج في مراكز خاصة مهنية معدة لهذا الغرض لتقليل نسبة الوفيات والمعرفة المبكرة للمرض.