

Effectiveness of an Instructional Program Concerning Mediterranean Diet Regimen on Hepatic Cirrhosis Patient's Knowledge

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Abstract: ***Back ground:** An important beneficial effect of adherence to the Mediterranean diet is certainly the reduction of mortality from all the causes. Mediterranean diet is able to decrease the risk of mortality and reduce the incidence of some of the most important disease states, but also is able to determine a better and longer life with a better psychological wellbeing and a higher perceived health status. Chronic diseases constitute a fast increasing burden to society. The World Health Organization (WHO) estimated that 46% of global diseases morbidity and 59% of mortality are due to chronic diseases. **Objectives:** the study aims to evaluate the effectiveness of instructional program on patient's knowledge toward Mediterranean Diet regimen. **Methodology:** A purposive sample of 30 patients was exposed to instructional program about Mediterranean Diet regimen, the study was conducted at Gastroenterology and Hepatology Teaching Hospital. The questionnaire consists of three parts, the first part is related to socio-demographic data of patients which as (7) items, second part is related to anthropometric measurements by using Body Mass Index (BMI) to evaluate nutritional status, and the third part is related to Mediterranean Diet regimen dealing (19) items. A descriptive statistical and inferential analysis was used to analysis the data. **Results:** the findings of present study revealed that the instructional program were effective on patients through the patients responses at posttest which as; the total mean of mean for Mediterranean Diet regimen items at pretest was 1.04 which indicate low knowledge to 1.6 at posttest, which indicate improvement in patients knowledge. **Conclusion:** the study concluded that the patients was improved their knowledge toward the Mediterranean Diet regimen. **Recommendation:** Health oriented mass media approach should be employed to improve the awareness about Mediterranean diet (MD). established specific department of Nutritional therapy in all hospital which received digestive disease patients. Advice, menu and guidelines by dietitian of the Mediterranean diet regimen should be undertaken for all cirrhotic patients to prevent occurrence of complications of malnutrition.*

Keywords: hepatic cirrhosis, patient's knowledge, Mediterranean Diet

1. Introduction

Liver disease causes serious public health problems because of its high prevalence worldwide and poor long-term clinical outcome, including premature deaths from liver de compensation, cirrhosis, and hepatocellular carcinoma (1). Cirrhosis is an increasing cause of morbidity and mortality in more developed countries. It is the 14th most common cause of death in adults worldwide but the fourth in central Europe; it results in 1.03 million deaths per year worldwide (2). Liver cirrhosis represents the highest four causes of death in all countries in our area. The death rate which is caused by cirrhosis in Egypt constitutes the highest in the world, followed by Pakistan, Afghanistan, Yemen and Morocco. Pakistan, among other is specifically experiencing an epidemic of cirrhosis. However, liver cancer is among the highest four causes of death in 18 countries. In Iraq, chronic liver diseases are very common and account for 2/3rd of the admissions. The important causes of this disease can be arranged as follows: hepatitis B, alcohol, hepatitis C, immune hepatitis and metabolic diseases. Among these causes, chronic hepatitis B and C are considered the main causes of liver cirrhosis and progression to hepatocellular carcinoma (3). Malnutrition develops when the body receives insufficient nutrients, such as carbohydrate, protein, essential fatty acids, amino acids, micronutrients, and vitamins, to maintain healthy tissues and organ function. The liver plays a crucial role in the regulation of the body's nutritional status. Patients with chronic liver disease are often malnourished, and there is a correlation between the severity of liver

disease and degree of malnutrition. Furthermore, there is a correlation between the degree of malnutrition and increased rates of in-hospital mortality, longer hospital stays, higher post-transplant morbidity and mortality and greater costs (4). The constituents of dietary regimen are very important for those patients and can help reduce the suffering and economic burden caused by such diseases. So, a proper diet in patients afflicted by liver disease provides the nutrients needed to stay healthy, while at the same time limits nutrients that cause further liver damage. Specifically, compensate cirrhotic patients are hyper-metabolic and need a normal or higher quantity of protein to achieve nitrogen balance and avoid malnutrition. Surveys in general hospitals found that about 20% of hepatic disease patients are malnourished. Malnutrition affects the progress and recovery of these patients as it increases the risk of infection, extends hospital stay, and makes re-admission more likely (5).

2. Methodology

Research design

The quasi-experimental research design (two-dimensional demonstration of pre-test-posttest design) conducted on hepatic cirrhosis patients towards instructional program concerning Mediterranean diet regimen with application of pre-post-test approach for the study group in evaluating their knowledge. It is implemented in order to accomplish the early stated objectives. The study starts from February 7th, 2017 through July 6th, 2017.

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Technical design setting

The study conducted in Gastroenterology & Hepatology Teaching Hospital in Medical City at Iraqi Baghdad Governorate

Sample of the study

A non- probability (purposive) sample of 30 adult patients who have hepatic cirrhosis which visited Gastroenterology and Hepatology Teaching Hospital in Medical City. The study selected according to the following criteria:

Inclusion Criteria to select the sample

The sample is selected according to the following criteria:

- 1) Patients with hepatic cirrhosis both male and female.
- 2) Adult patients age 19 years and above.
- 3) Those who are voluntary participated.
- 4) Those who did not participate in any instruction program concerning Mediterranean diet regimen.
- 5) Patients which have ability to complete the participation in the research regardless educational level.

Exclusion Criteria

- 1) Patients with hepatic coma.
- 2) Psychiatric patients.
- 3) Patients with renal failure
- 4) Patients with Hematology
- 5) Patients with cancer

Steps of the study

Step I: Preliminary assessment: The aims of this steps is to evaluate the knowledge of hepatic cirrhosis patients about Mediterranean diet regimen, the questionnaire was composed of (19) items related to Mediterranean diet regimen.

Step II: Construction of the Instructional Program: the program was included healthy benefit of Mediterranean diet regimen and pattern, the effects on liver cirrhosis patients, health problems associated with liver cirrhosis patients, Dietary guidelines for liver cirrhosis.

Tool I: patient assessment sheet

It developed by the researcher after reviewing of literature; it was consisted of three parts:

Part (1): socio-demographic data sheet

This portion is concerned with the collection of basic socio-demographic data gained from the patients from interview questionnaire sheet as (age, gender, education level, marital status, occupation, Place of residence, socio-economic status)

Part (2): Anthropometric measurements to evaluate nutritional status:

- A) Patient weight in kg.
- B) Patient height in cm.
- C) BMI = (Weight in kg/height in m²).

Standards classify a BMI for adult at less than 18.5 as underweight, a BMI between 25 and 29 as overweight and a BMI greater than 30 as obese. A healthy BMI for adults is considered between 18.5 and 24.9.

Part (3): patient knowledge about liver cirrhosis

It was composed of (19) Items. The items were know and don't know questions. These rated as (2) for answer know and (1) for the don't know answer. The time of questionnaire answer list, for each patient took about (10-15) minutes.

***Validity of the instrument**

The content validity of the instruments has been established through a panel of thirteen (13) experts ; (5) experts from the faculty of Nursing / university of Baghdad ;(5) experts from Gastroenterology and Hepatology teaching Hospital in Baghdad City , (1) expert from college of health and medical technology / Baghdad,(2) experts from Nutritional Research Institute.

Data are analyzed through the application of Statistical Package of Social Sciences (SPSS) version (20) program of these approaches (Descriptive Statistical Data Analysis Approach and The Inferential Statistics Data Analysis

3. Results

The current study is carried out to evaluate patient knowledge about Mediterranean diet.

Table 1: Distribution of the study Sample by Socio-demographic Characteristics

Variables	Classification	Frequency	Percentage
			%
Gender	Male	18	60.0
	Female	12	40.0
Age	19-28	7	23.3
	29-38	3	10.0
	39-48	3	10.0
	49-58	7	23.3
	59 and more	10	33.4
Statistics	Mean ± SD	46.8 ±14.1	
Level of Education	Read and Write	4	13.3
	Primary school	11	36.7
	Intermediate School	5	16.7
	Secondary School	7	23.4
	Diploma	2	6.6
	University and above	1	3.3
Marital Status	Single	9	30.0
	Married	19	63.3
	Widowed	2	6.7
Employments	Government employee	6	20.0
	Free job	7	23.3
	Retired	8	26.7
	Housewife	9	30.0
Residency	Urban	24	80.0
	Rural	6	20.0
Socio-economic Status	High Level	5	16.7
	Middle Level	18	60.0
	Low Level	7	23.3

N: number, **%:** percentage, **SD:** stander deviation, **yrs. years**

The table (1) shows that the majority of the study sample are male (60.0%),and the remaining are female(40.0%) and also shows that the vast majority of the study sample are within fifth category of age groups and accounted for (33.4%). Relative to patients level of education, the greater number of them of study sample primary school and accounted for

(36.7%) Regarding to the patients marital status, the majority of the sample are married and they accounted for (63.3%). In addition, the major group of the study sample in regarding to their employments status are house wives and they accounted for (30.0%) and this table depicts that the highest percentage of the study sample are living in urban residential area and they accounted for (80.0%). Finally, in the above table and in regarding to the patients socio-economic status, the results show that the major group of the study sample are within the moderate level of socio-economic status (60.0%).

Table 2: Distribution of the study sample to assess nutritional status by body mass index (BMI)

Variables	Classification	Frequency	Percentage %
Nutritional Status	Normal	3	10.0
	At risk malnutrition	11	36.7
	Malnutrition	16	53.3

N: number, %: percentage

This table summarizes the patients nutritional status the result indicate (53.3%) of the study sample malnutrition, (36.7%) at risk malnutrition and (10.0%) of them are normal nutrition.

Table 3: Pre and Posttest Knowledge of Patients concerning general knowledge about Mediterranean Diet

No.	Items	Pretest			Posttest		
		Mean	SD	Level	Mean	SD	Level
1	Mediterranean Diet Food means a recommended diet and is considered a healthy eating habits and has a positive effect on health outcomes	1.03	.182	L	1.73	.583	H
2	The main aspects of the Mediterranean diet is to eat fruits, vegetables, and whole grains in large amounts daily	1.03	.182	L	1.63	.490	M
3	Main aspects of the Mediterranean diet Eat dairy products, chicken and fish in moderate amounts per week	1.00	.000	L	1.66	.479	M
4	The main aspects of the Mediterranean Diet Food Eat meat and sweets in small quantities	1.00	.000	L	1.63	.490	M
5	The Mediterranean Diet focuses on the diversity of protein sources, mean , the concentration of vegetable protein over animal protein	1.00	.000	L	1.66	.479	M
6	The Mediterranean diet focuses the diet of refined grains into whole grains	1.00	.000	L	1.63	.490	M
7	The Mediterranean diet focuses the trend of fruit added sugar to fresh fruit	1.00	.000	L	1.66	.479	M
8	The size of the fruit meal in the Mediterranean diet is two and a half cups per day	1.00	.000	L	1.56	.504	M
9	The size of the vegetable meal in the Mediterranean diet is two and a half cups per day	1.00	.000	L	1.60	.498	M
10	The size of the dark vegetable meal in the Mediterranean diet is one and a half cups per week	1.00	.000	L	1.60	.498	M
11	The size of the red and yellow vegetables meal in the Mediterranean diet is five and a half cups per week	1.03	.182	L	1.60	.498	M
12	The size of grain meal in the Mediterranean diet 168 grams per day	1.00	.000	L	1.56	.504	M
13	The total grain meal in the Mediterranean diet is 84 grams or more per day	1.13	.345	L	1.63	.490	M
14	The size of the grain meal in the Mediterranean diet is 84 grams or less per day	1.00	.000	L	1.63	.490	M
15	The size of a dairy meal in the Mediterranean diet is two cups per day	1.03	.182	L	1.63	.490	M
16	The size of a protein meal (red meat, fish, eggs and walnuts in the Mediterranean diet food 182 grams per day	1.00	.000	L	1.60	.498	M
17	Volume of the share of oils (olive oil, sunflower oil or corn oil in the Mediterranean diet 27 grams per day	1.00	.000	L	1.63	.490	M
18	Benefits of Mediterranean Diet Food protection from type II diabetes, heart disease and make the person graceful etc.	1.00	.000	L	1.60	.498	M
19	The diet of the Mediterranean diet by food groups is vegetables, fruits, cereals, dairy products, protein foods and oils	1.00	.000	L	1.63	.490	M
Total mean		19.9			30.93		
Mean of Mean		1.04		L	1.62		M

1 -1.33= low level (L), 1 – 1.67= Middle level (M), 1.68 – 2 = High level (H)

This table summarize pre& posttest the patients responding regarding general knowledge about Mediterranean diet that are done by using mean of score(MS), standard deviation (SD) , and mean of mean (MM), we can observe the mean of mean altered from(1.04) which indicate low knowledge to (1.62)which indicate moderate knowledge.

4. Conclusion and Recommendation

According to the findings of the present study, the researcher arrives at the following conclusion: Liver cirrhosis mostly occurs in male than in female. The study confirms that the hepatic cirrhosis mostly common occurs among patients in urban residential area more than in rural. Most of the study

samples are married. The vast majority of the hepatic cirrhosis patients are housewife. The vast majority of the hepatic cirrhosis patients in study sample are primary school .The vast majority of the participants are having moderate monthly income in study sample. The vast majority of the hepatic cirrhosis patients in study sample are malnutrition. The study indicates that the application of the instructional program concerning patient's knowledge about Mediterranean diet for patients with hepatic cirrhosis showed an improvement in patient's knowledge in study sample.The study recommended intensive comprehensive wide population-based studies could be conducted to enhance the hepatic cirrhosis patient's knowledge about Mediterranean diet.

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