

PATIENT'S KNOWLEDGE RELATED TO CARDIAC CATHETERIZATION IN AL-HILLAH TEACHING HOSPITALS

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ABSTRACT

Background : Patient education is critical prior to cardiac catheterization; the nurse should explain the technique to the patients. Patients must also visit a catheterization laboratory and watch a video of the process. The nurse's duty includes not only patient education, but also monitoring and care for the patient after cardiac catheterization to avoid any problems.

Objective : to assess patient's knowledge regarding cardiac catheterization and find out relationship between the patients knowledge and their demographical characteristics such as (age , gender , educational status) .

Methodology : Quantitative – Cross sectional study design was used to accomplish the objectives of the study which titled as assessment of patient's knowledge related to cardiac catheterization in Al- Hillah teaching hospitals. This research was carried out in Al-Hillah City \ babil center for cardiac catheterization in Imam Al-sadiq Teaching Hospital and Shaheed Al-Muhrab center for cardiac catheterization and cardiac surgeries . Purposive - non-probability sample was selected to carry out the study which consist of (200) patients who undergoing cardiac catheterization . (67) patients from the babil center Imam Al- Sadiq Teaching Hospital while (133) patients from Shaheed Al-Muhrab center for cardiac catheterization and cardiac surgeries, distributed as (136) male and (64) female.

Results: the study results that shows general assessment of the patient's knowledge related to pre and post cardiac catheterization good knowledge (1.71 ± 0.228) , (1.72 ± 0.229) , while general assessment of the patient's knowledge related to during cardiac catheterization low knowledge (1.57 ± 0.364) .

Conclusion: Patient's knowledge recorded moderate in level related pre and post intervention and instructions while , the patient's knowledge recorded low in level related to patients experience during the cardiac catheterization procedure and No significant relationship presented between patients knowledge and their demographical characteristics (age , gender , educational level).

Recommendation : Preparation of written instructions with scientific background may be provided to the patients who undergoing cardiac catheterization which includes all phases of the procedure is beneficial to their health outcome.

Keywords : Knowledge , Patient and Cardiac Catheterization

I. INTRODUCTION

Cardiac catheterization is an important tool for determining the hemodynamic status of structural heart disease patients (SHD). The number of cardiac catheterization procedures and associated trans catheter treatments for (SHD) has increased recently as a result of more advanced therapeutic strategies for (SHD) and an increased incidence of adult congenital heart disease. The methodology and medical environment for cardiac catheterization vary significantly between catheterization laboratory sites and regions, which could lead to variances in cardiac catheterization difficulties .(Lee et al., 2016)

Cardiac catheterization is the insertion and transit of small plastic tube (catheters) into veins and arteries leading to the heart in order to produce x-ray images of coronary arteries and cardiac chambers (angiography) and to assess heart pressures (hemodynamics). In Iraq, the Ministry of Health produced the Patient Rights Charter (PRC), which outlines the most significant professional requirements for practitioners: they must ensure that their patients have been accurately informed about remedial action and its repercussions before agreeing to treatment. They should be certain that patients fully comprehended the therapy information given to them. According to Iraq's Ministry of Health and Environment, the number of cardiac catheterizations in Baghdad (15573) and Iraq as a whole increased in 2016. (43778). To prepare patients for cardiac catheterization, a number of actions must be completed. (Hamid H. J. 2019) . In 2019, 2,502 individuals underwent cardiac catheterization at al Hillah teaching hospitals' catheter facilities. In the year 2020, there will be 1638 patients; nevertheless, the number of patients has fluctuated substantially due to the epidemiological situation in the globe as a whole and in Iraq specifically. (the statistics of the cardiac catheterization centers in Hillah).

Cardiac catheterization professionals and nurses caring for post-cardiac catheterization procedure patients should collaborate to avoid complications where possible and manage them when they occur. To achieve these aims, nurses must conduct rigorous assessments and monitoring. The key to becoming a good and efficient nurse is education and current evidence-based practice. (Feroze et al., 2017).

Fears of laying down on operating table , medical access and external context which found in the hospital environment may increase the level of fear and anxiety feeling of patients. When fears pre-catheterization measured women recorded high level related to men patients regarding many issues such as uncertainly about their illness , possible future cardiac surgery , pain , death, complication after procedure and be away from their family and home , this feelings may be extended to lack of social activities and sexual difficulties . (Caldwell, P. H.,2007)

In an era of increased competition in health care, the involvement of the professional nurse in the care of patients undergoing cardiac catheterization is important for achieving a positive outcome for the patients. Nurses have a critical role in patient assessment, support, and education as the frequency of outpatient cardiac catheterizations rises. to provide the best possible care Nurses must thoroughly prepare the patient, both physically and emotionally. In order to avoid difficulties and ensure effective outcomes, adequate assessment and monitoring during the pre-catheterization, intra-catheterization, and post-catheterization experiences are essential. .(Amin, H. E.,2020)

II. OBJECTIVES OF THE STUDY

1. Assess patient's knowledge regarding cardiac catheterization .
2. find out relationship between the patients knowledge and their demographical characteristics such as (age , gender , educational status) .

Methodology

Quantitative – Cross sectional study design was used to accomplish the objectives of the study which titled as assessment of patient's knowledge related to cardiac catheterization in Al- Hillah teaching hospitals.

Setting and Sampling

This research was carried out in Al-Hillah City \ babil center for cardiac catheterization in Imam Al-sadiq Teaching Hospital and Shaheed Al-Muhrab center for cardiac catheterization and cardiac surgeries .Purposive - non-probability sample was selected to carried out the study which consist of (200) patients who undergoing cardiac catheterization . (67) patients from the babil center Imam Al- Sadiq Teaching Hospital while (133) patients from Shaheed Al-Muhrab center for cardiac catheterization and cardiac surgeries, distributed as (136) male and (64) female .

Administrative and ethical arrangements

Special ethical form full to obtain a formal paper to the ministry of health – Babylon health directorate . In order to collect the data of the study an official agreement was gained from Ministry of health. Babylon health department training and development center which directed to babil center for cardiac catheterization in Imam Al-sadiq Teaching Hospital and Shaheed Al-Muhrab center for cardiac catheterization and cardiac surgeries .In order to maintain the ethical consideration to complete the study. Formal agreement obtained from the ethical committee

college of nursing and oral agreement were obtained from the participants after explaining the objective of the study.

Results

Table (1) Distribution of Demographical Characteristics of the study sample

Variables		Study Sample (N=200)	
		F	%
Age groups	(40-49) years	31	15.5
	(50-59) years	76	38
	(60-69) years	93	46.5
Gender	Male	136	68
	Female	64	32
Level of Educational	Illiterate	9	4.5
	Can Read and write	39	19.5
	Primary school	72	36
	Intermediate school	12	6
	Secondary school	25	12.5
	Institute	24	12
	Bachelor	19	9.5
Marital Status	Married	183	91.5
	Single	2	1
	Divorce	4	2
	Widowed	11	5.5
Working Status	Employee	31	15.5
	Unemployed	37	18.5
	Jobless	52	26
	Retired	30	15
	House wife	50	25
Residency	Rural	128	64
	Urban	72	36

Table (2): Patient's knowledge related to pre- cardiac catheterization preparation

No.	Items	Mean \pm SD	Level
1	The health team advice the patient who undergoing cardiac catheterization to stop which of the following medications before the procedure	1.81 \pm 0.393	good knowledge
2	The health team advice the patient who undergoing cardiac catheterization to shave which of the following area before the procedure	1.82 \pm 0.389	good knowledge
3	Patients who undergoing cardiac catheterization instructed to remove one of the following objects because its contraindicated during the procedure	1.72 \pm 0.450	good knowledge
4	All the following options can be performed by the patient before entry the catheterization laboratory : -	1.34 \pm 0.475	good knowledge
5	It's necessary to stop eating and drinking before the procedure in order to :	1.87 \pm 0.417	good knowledge
6	The main purpose of cardiac catheterization is to	1.94 \pm 0.229	good knowledge
7	The purpose of laboratory test which performed before cardiac catheterization are to :	1.78 \pm 0.412	good knowledge
8	The following instruction may be relieved from the health team personals before the procedure :	1.40 \pm 0.490	low knowledge
9	The main purpose of shaving the site of catheterization insertion is to :	1.48 \pm 0.501	low knowledge

10	The complication of the cardiac catheterization may be divided to local and general complication .	1.99 ±0.100	good knowledge
General assessment		1.71 ±0.228	good knowledge

Table (3) Patient's knowledge related to intra-cardiac catheterization procedure .

No.	Items	Mean ±SD	Level
1	The method of anesthesia which use in this procedure is :	1.99 ±0.100	good knowledge
2	The patient awareness inside the catheterization laboratory described as :	1.95 ±0.208	good knowledge
3	Cardiac catheterization dye which used consider as material :	1.18 ±0.385	low knowledge
4	When the patient replaced on the operating table he covered totally with sterile drape in order to :	1.60 ±0.491	good knowledge
5	During administration of dyes the patient may feel , Which consider normal	1.54 ±0.500	low knowledge
6	During the procedure warning symptoms may be occurs as a serious complication of the catheterization , the patient should announce the health team about is :	1.07 ±0.247	low knowledge
7	During the procedure the common technical complication may be happen . is anyone told you about ?	1.96 ±0.196	good knowledge
8	When the procedure finished the patient transferred to the post - catheterization room by :	1.34 ±0.473	low knowledge
General assessment		1.57 ±0.364	low knowledge

Table (4) Patient's knowledge related to post-cardiac catheterization procedure .

No.	Items	Mean ±SD	Level
1	According to health team advise after the procedure finished . the patient can moved in his \ her bed by within	1.37 ±0.483	low knowledge
2	If the catheterization inserted through the groin area , the patient advised not to perform one of the following options :	1.74 ±0.437	good knowledge
3	All the following answers consider post-catheterization complications except :	1.41 ±0.494	low knowledge
4	One of the important issues that the health team recommends after the catheter is	1.87 ±0.343	good knowledge
5	When the procedure completed , whether diagnostic or therapeutic and the patient with stable condition he\ she can leave the hospitals :	1.44 ±0.498	low knowledge
6	When the patient try to get out from the bed he\ she may feel dizziness because of :	1.95 ±0.218	good knowledge
7	The sheathe of a catheter removed after :	1.90 ±0.301	good knowledge
8	One of the important issues that the health team recommends after discharge is :	1.80 ±0.401	good knowledge
9	The patient is advised to take one of the following options after the procedure to get rid of the test dye by :	1.87 ±0.343	good knowledge
10	All the following concepts considered as health tips which should be followed by heart problems except :	1.92 ±0.264	good knowledge
General assessment		1.72 ±0.229	good knowledge

Table (5) Association between age of participants and their knowledge.

Patient's knowledge	Age groups		Levels of Patient's knowledge		Chi	Sig.
			Good knowledge	Low knowledge		
Knowledge related to cardiac catheterization	(40-49) years	F	225	85	2.184 ^a	0.335 Non Sig.
		%	72.6	27.4		
	(50-59) years	F	504	255		
		%	66.4	33.6		
	(60-69) years	F	697	233		
		%	74.9	25.1		
Knowledge related to operation of cardiac catheterization	(40-49) years	F	137	111	0.326 ^a	0.849 Non Sig.
		%	55.2	44.8		
	(50-59) years	F	347	261		
		%	57.1	42.9		
	(60-69) years	F	441	303		
		%	59.3	40.7		
Knowledge related to post operation of cardiac catheterization	(40-49) years	F	235	75	0.955 ^a	0.620 Non Sig.
		%	75.8	24.2		
	(50-59) years	F	533	227		
		%	70.1	29.9		
	(60-69) years	F	687	243		
		%	73.9	26.1		

Table (6) Association between gender of participants and their knowledge

Patient's knowledge	Gender		Levels of Patient's knowledge		Chi	Sig.
			Good knowledge	Low knowledge		
Knowledge pre cardiac catheterization	Male	F	965	394	117.632 ^a	0.000 High Sig.
		%	71	29		
	Female	F	461	179		
		%	72	28		
Knowledge during cardiac catheterization	Male	F	621	467	101.921 ^a	0.000 High Sig.
		%	57.1	42.9		
	Female	F	304	208		
		%	59.4	40.6		
Knowledge after cardiac catheterization	Male	F	979	381	119.328 ^a	0.000 High Sig.
		%	72	28		
	Female	F	476	164		
		%	74.4	25.6		

Table (7) Association between level of education of participants and their knowledge .

Patient's knowledge	level of education		Levels of Patient's knowledge		Chi	Sig.
			Good knowledge	Low knowledge		
Knowledge pre cardiac catheterization	Illiterate	F	68	22	7.618 ^a	0.267
		%	75.6	24.4		
	Can Read and write	F	275	115		
		%	70.5	29.5		
	Primary school	F	516	203		
		%	71.7	28.2		
	Intermediate school	F	80	40		
		%	66.7	33.3		
	Secondary school	F	198	52		
		%				

		%	79.2	20.8		
	Institute	F	167	73		
		%	69.6	30.4		
	Bachelor	F	122	68		
		%	64.2	35.8		
Knowledge during cardiac catheterization	Illiterate	F	40	32	3.819 ^a	0.701
		%	55.6	44.4		
	Can Read and write	F	179	133		
		%	57.4	42.6		
	Primary school	F	330	246		
		%	57.3	42.7		
	Intermediate school	F	58	38		
		%	60.4	39.6		
	Secondary school	F	131	69		
		%	65.5	34.5		
	Institute	F	107	85		
		%	55.7	44.3		
	Bachelor	F	80	72		
		%	52.6	47.4		
Knowledge after cardiac catheterization	Illiterate	F	69	21	1.370 ^a	0.968
		%	76.7	23.3		
	Can Read and write	F	291	99		
		%	74.6	25.4		
	Primary school	F	517	203		
		%	71.8	28.2		
	Intermediate school	F	89	31		
		%	74.2	25.8		
	Secondary school	F	178	72		
		%	71.2	28.8		
	Institute	F	174	66		
		%	72.5	27.5		
	Bachelor	F	137	53		
		%	72.1	27.9		

III. DISCUSSION

Findings presented a two-thirds of the patients (46.5%) were aged between 60-69 years old, due to the cardiac catheterization occurs in advanced age. In terms of gender, findings indicated that the male patients were the majority (68%) compared with those who are female (32%). Education related findings, most of cardiac catheterization patients were primary school graduated, Findings demonstrated that the most of the study sample were married. In regards with work status, findings showed that the patients were jobless and residents in rural areas. This finding goes parallel with a study which carried out by Hamid, 2019, on patients undergoing cardiac catheterization be found there 79(65.8%) was male, concerning age, Mean age of the participants was (55.6) years within the age group (54-58). In relation to marital status 115(95.8%) were married. The most common educational level is primary school graduate of 77(64.2%). Concerning occupation are the self- employee 42 (35%). Regarding to the Sources of information about coronary catheterization the majority of sample 88(73.3%) were no source; Concerning smoking: the most common are smoking which were 63(52.5%). group. 116(96.7%) patients were they live in the city (Hamid, 2019).

Which, a study which carried out to access patient's knowledge regarding cardiac catheterization reveals that more than half of the study samples were female, illiterate, within the age range of 51 years and above. 46% of the samples were married. 52% had previous history of cardiac catheterization and 56% got sources of knowledge and information about cardiac catheterization from health workers (Abdulmaleek, 2019).

Findings demonstrates that the major assessment of items recorded good knowledge (1.71±0.228) .Most of the patients who scheduled for cardiac catheterization who attended outpatient and obtain their knowledge regarding pre-procedure preparation to be ready for the procedure , self-preparation . makes the patient ask about details .

Cardiac catheterization. Opposite, previous studies demonstrated that in patients undergoing coronary angiography has low knowledge about this procedure; study was done in Turkey showed a significant low knowledge levels and lack of awareness among patients undergoing coronary angiogram for the first time (Açar et al., 2019).

Findings indicate that the patients express a low level of knowledge towards cardiac catheterization. This findings consisting with findings of study conducted in Egypt among patients undergo cardiac catheterization. The majority of study population had unsatisfactory level of knowledge as being patients need to be training for undergoing cardiac catheterization (Amin et al., 2020). Also, in another study conducted among Bangladeshi hospitalized patient., findings confirmed cardiac patients have poor knowledge regarding their disease; improvement of knowledge is needed through much education to prevent CAD (Rahman et al., 2013).

The lack of knowledge about catheterization due to the absence of civil society institutions, collective support, or rehabilitation centers that take care of these patients.

Based on those findings , the health educational program is effective to improve the patient's knowledge concerning coronary heart diseases procedure nurses should be playing a greater role to provide the information during the procedure to reduce fear and anxiety and to reduce complication to the patients undergoing coronary heart diseases procedure .

Findings indicate that the patients express a good level of knowledge towards post procedure of cardiac catheterization. With same regards, patient satisfaction in cardiology after cardiac catheterization. Patients were most satisfied with the kindness of medical practitioners and nurses due to patients takes information about their health status (Weidemann et al., 2016).

Within post-educational protocols, there was a rise in patient knowledge across all fields of care related to cardiac catheterization. Although the majority of the patients reported satisfied with the nursing care provided by nurses who had completed an educational regimen before to, during, and after the cardiac catheterization operation. (Elgazzar & Keshk, 2018).

A total of 66 participants responded to the survey, providing us a response rate of 48 percent. Generally, there was a high degree of patient satisfaction and good knowledge. This included things like staff civility and respect, the hygiene of the clinical area, and the efficiency with which personnel communicated information. (O'Connor et al., 2017).

There were no association between patients knowledge and their age and gender at p -value >0.05 . As well as, there were highly association between patients knowledge and their gender at p -value ≤ 0.05 . This study shows there was no significant association between the patient's knowledge with their demographic characteristics, chronic illness and their family history. The researcher confirms that knowledge about coronary catheterization should be provided to patients as a whole regardless of their sex, age, social status, occupation, have diabetes or hypertension, as well as, the education level has been play an importance associated with knowledge (Hamid, 2019).

IV. CONCLUSION:

1. Patient's knowledge recorded moderate in level related pre and post intervention and instructions while , the patient's knowledge recorded low in level related to patients experience during the cardiac catheterization procedure
2. No significant relationship presented between patients knowledge and their demographical characteristics (age , gender , educational level).

Recommendation:

Preparation of written instructions with scientific background may be provided to the patients who undergoing cardiac catheterization which includes all phases of the procedure is beneficial to their health outcome

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