



Evaluation of Patients' Knowledge and Adherence to Clopidogrel Therapy Post Percutaneous Coronary Intervention

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Abstract

Objectives: To evaluate patients' knowledge and their adherence to clopidogrel therapy post percutaneous coronary intervention (PCI) and to find out the relationship between patients' knowledge and their adherence to clopidogrel therapy post PCI.

Methodology: A descriptive study was carried out at Al-Nasiriyah Heart Center in Thi-Qar Governorate for the period of May 19th 2022 to October 25th 2022. A non-probability sampling was used to select (50) patients after their Percutaneous Coronary Intervention. The study instrument was used to collect data which was composed of three parts of sociodemographic characteristics, patients' knowledge regarding clopidogrel therapy post percutaneous coronary intervention PCI which was comprised of (16) questions and General Medication Adherence Scale which was consisted of (11) questions. Data were analyzed using IBM SPSS version 26. Descriptive and inferential data analysis were utilized to analyze the data.

Results: The study indicated that patients had knowledge deficit (82%) and low adherence (84%) to Clopidogrel therapy.

Conclusion: The study concluded that there was a lack of patients' knowledge and adherence to clopidogrel therapy post percutaneous coronary intervention.

Recommendation: The study recommended that establishing an educational program regarding cardiac medications, such as Clopidogrel to increase patients' knowledge and improve their adherence post percutaneous coronary intervention.

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تقويم معارف وإلتزام المرضى لعلاج كلوبيدوغريل بعد التداخل القسطاري التاجي

المستخلص

الهدف: لتقويم معارف وإلتزام المرضى لعلاج الكلوبيدوغريل بعد التداخل القسطاري التاجي ولإيجاد العلاقة ما بين معارف المرضى ومدى التزامهم لعلاج كلوبيدوغريل بعد التداخل التاجي.

المنهجية: أجريت دراسة وصفية في مركز الناصرية للقلب بمحافظة ذي قار للفترة من ١٩ أيار ٢٠٢٢ إلى ٢٥ تشرين الأول ٢٠٢٢. تم إختيار عينة غير احتمالية تتكون من (٥٠) مريض بعد إجراءهم التداخل القسطاري التاجي. الأداة التي إستخدمت لجمع البيانات تكونت من ثلاثة أجزاء هي الصفات الديموغرافية-الإجتماعية، معارف المرضى لعلاج كلوبيدوغريل بعد التداخل القسطاري التاجي والذي يتكون من (16) سؤال ؛ وإلتزام المرضى بعلاج كلوبيدوغريل بعد التداخل القسطاري التاجي وإستخدام مقياس الإلتزام بالأدوية العام والذي يتكون من (١١) سؤال. حلت البيانات من خلال إستخدام برنامج SPSS نسخة ٢٦ وإستخدام تحليل البيانات الإحصائية الوصفي والإستنتاجي.

النتائج: أشارت الدراسة إلى أن المرضى لديهم نقص في المعارف بنسبة (82%) وقلة في إلتزامهم بنسبة (84%) بعلاج كلوبيدوغريل بعد التداخل القسطاري التاجي.

الإستنتاجات : إستنتجت الدراسة بأن هنالك نقص في معارف المرضى وإلتزامهم بعلاج كلوبيدوغريل بعد التداخل القسطاري التاجي.

التوصيات: توصي الدراسة بإجراء برنامج تعليمي خاص بالعلاجات القلبية مثل الكلوبيدوغريل لتحسين معارف المرضى وإلتزامهم بعد إجراء عملية التداخل القسطاري التاجي.

الكلمات المفتاحية : معارف المرضى، إلتزام المرضى، علاج الكلوبيدوغريل، التداخل القسطاري التاجي

Introduction:

Coronary artery disease (CAD) represents to be first as a cause of death worldwide ^(1,2). Hospitals morbidity data provided by Iraqi Ministry of Health in 2004 demonstrates a (65%) increase of the hospital admission due to CAD and stroke more than a fivefold increase in outpatient visits with the same diagnoses between 1989 and 1999. Iraq is in the top (25) countries in the Middle East with age-adjusted CAD mortality rates of about (214) per (100,000). It has been projected that between 1990 and 2020, CAD mortality in the Middle East countries will increase by 146% for women and 174% for men ⁽³⁾. Percutaneous coronary intervention procedure are frequently used to treat cardiac patients nowadays in order to improve blood flow to the myocardial tissues and prevent complications caused by tissue damage from ischemia ⁽⁴⁾.

The revascularization procedure known as percutaneous coronary intervention (PCI), commonly referred to as coronary angioplasty, is used either electively to relieve angina symptoms in people with stable coronary artery disease or urgently to treat those with acute coronary syndrome ⁽⁵⁾.

A significant benefit of PCI is that it can increase myocardial perfusion without the requirement for recovery-intensive coronary artery bypass surgery, death is one of the serious complications, however it is not common ⁽⁶⁾. However, by utilizing anticoagulants and antiplatelet medications in the right quantities, these issues can be avoided. Cardiovascular diseases must be treated successfully with antiplatelet therapy ⁽⁷⁾.

The evaluation of medication adherence for medications used in the secondary prevention of myocardial infraction has been studied in many industrialized and some developing nations, according to a literature search ⁽⁸⁾.

According to various estimates, only between (40%–75%) of those who have acute coronary syndrome (ACS) adhere to their secondary preventive drugs ⁽⁹⁾. Just (50%) of patients say they take their cardiovascular disease (CVD) meds as directed ⁽¹⁰⁾.

Patients with chronic diseases generally have very low adherence rates, which continue to drop dramatically beyond the first three months of treatment ⁽¹¹⁾. The health consequences of this non-adherence are

significant. It is generally recognized that failure to take drugs as prescribed can lead to clinical outcomes, such as hospitalization, deterioration of chronic illnesses, rise in medical expenses, and even death ⁽¹²⁾. To lower the risk of stent thrombosis and repeated ischemic episodes, medication compliance is crucial ⁽¹³⁾.

The study aims to evaluate patients' knowledge and adherence to clopidogrel therapy post percutaneous coronary intervention (PCI), and to find out the relationship between patients' knowledge and their adherence to clopidogrel therapy post PCI.

Methodology

A descriptive study was carried out between May 19th to October 25th 2022. The study was conducted at (internal ward), Al-Nasiriyah Heart Center, a government hospital in Thi-Qar, Iraq.

A non-probability sampling of (50) cardiac patients were selected post percutaneous coronary intervention.

The ethical approval was obtained from the Scientific Research Ethical Committee at College of Nursing-University of Baghdad. The study's overall purpose and the completion of the questionnaire were

explained to the participants and the data would be kept private and safe during and post their participation in the study.

The instrument was comprised of (33) questions in three parts of sociodemographic characteristics which included (6) questions; Patients' knowledge about clopidogrel therapy post percutaneous coronary intervention which consisted of (16) questions; and General Medication Adherence Scale of (11) items. These items were evaluated on 3-level type Likert Scale of 1 = Always, 2= Sometimes and 3 = Never.

The content validity of questionnaire was obtained through panel of (14) experts who had more than (10) years of experience in the field and the internal consistency reliability of the questionnaire was determined through collecting data from (10) patients at Al-Nasiriyah Heart Center.

The data were analyzed through the application of the statistical analysis system (SPSS) version 26, and the descriptive and inferential statistical data analysis approach were used, which include descriptive data analysis (frequencies and percentage, mean and standard deviation and inferential data analysis of independent sample t-test and multiple linear regression.

Results

Table (1): Distribution of Patients According to Their Socio-demographic Characteristics

List	Characteristics		Sample	
			f	%
1	Age (Years)	28 – 35	1	2
		36 – 43	4	8
		44 – 51	22	44
		52 – 59	21	42
		60 and more	2	4
		<i>Mean ± SD</i>	<i>50 ± 6</i>	
2	Gender	Male	32	64
		Female	18	36

		Total	50	100
3	Level of Education	Read & write	11	22
		Primary school	14	28
		Intermediate school	10	20
		Secondary school	5	10
		Diploma	3	6
		University	7	14
		Total	50	100
4	Occupation	Unemployed	9	18
		Worker	28	56
		Employee	13	26
		Retired	0	0
		Total	50	100
5	Marital Status	Single	0	0
		Married	45	90
		Widowed/er	5	10
		Divorced	0	0
		Total	50	100
6	Monthly Income	Insufficient	31	62
		Barely sufficient	15	30
		Sufficient	4	8
		Total	50	100

No: Number, f: Frequency, %: Percentage, SD: Standard Deviation

This table indicates that average age of patients in the study was between (44 – 51) years old. Male patients represented (64%) of the sample; Only 7 (14%) finished a degree. (56%) of the patients were workers; (90%) of respondents are married; and (62%) of patients had insufficient monthly income.

Table (2): Evaluation of Patients' Knowledge about Clopidogrel Therapy Post Percutaneous Coronary Intervention

Level of Knowledge	(N= 50)			
	F	%	M	SD
Poor	41	82	2.98	2.832
Fair	8	16		
Good	1	2		
Total	50	100		

f: Frequency, %: Percentage, M: Mean of total score, SD Standard deviation

Poor= 0 - 5.33, Fair= 5.34 - 10.67, Good= 10.68 - 16

This table shows that the majority of patients have poor level of knowledge (82%).

Table (3): Evaluation of Patients' Adherence to Clopidogrel Therapy Post Percutaneous Coronary Intervention

Levels of Adherence	(N= 50)			
	F	%	M	SD
Poor	42	84	7.44	4.021
Low	6	12		
Partial	2	4		
Good	0	0		
High	0	0		
<i>Total</i>	<i>50</i>	<i>100</i>		

f: Frequency, %: Percentage, M: Mean of total score, SD Standard deviation
Poor= 0 – 10, Low= 11 – 16, Partial= 17 – 26, Good= 27 – 29, High= 30 – 33

This table presents the overall evaluation of patients' medication adherence; the findings reveal that patients in the study were showing poor level of adherence (84%).

Table (4): Correlation between Patients' Knowledge and Adherence to Clopidogrel Therapy Post Percutaneous Coronary Intervention

Correlation		(N=50)	
		Knowledge	Adherence
Knowledge	<i>Pearson Correlation</i>	1	.546
	<i>Sig. (2-tailed)</i>	-	.001
Adherence	<i>Pearson Correlation</i>	.546	1
	<i>Sig. (2-tailed)</i>	.001	-

This table indicates that there is strong positive relationship between patients' knowledge and adherence to Post Percutaneous Coronary Intervention at p-value = 0.001

Discussion:

The study's findings showed that the majority of the study group's age range, between 44 and 51 years old, saw the highest percentage of participants. (44%), per age group. This finding is supported by a study which was conducted in Southeast

Brazil with patients who, on average, were (57) years old⁽¹⁴⁾.

With regarding to gender, the study's findings showed that (64%) of the study group's participants were male. According to study's findings, it had been

shown that based on data collected in Pakistan, (68.8%) of patients were men ⁽¹⁵⁾.

As for as the educational status, the study finding displayed that majority of study group patients were Primary School indicated that majority of sample are (28%). This result had agreed to a study was carried-out in Gaborone, Botswana the majority of patients were Primary School (32.7%) ⁽¹⁶⁾.

As for as the occupational status, the study finding displayed that majority of sample are (56%) study group patients were worker. This result had agreed to a study was carried-out in Iran, the majority of patients were Self employed (%60) ⁽¹⁷⁾.

Regarding to marital status, the study found that most patients were married, and they are accounted (90%). This result had agreed to a study was carried-out in Gaborone, Botswana the majority of patients were married (41.3%) ⁽¹⁶⁾.

As for as the Monthly income, the study finding displayed that majority of sample are (62%) study patients is Insufficient. This result had agreed to findings of a study was carried-out in Al-Najaf City, the majority of patients have low income ⁽¹⁸⁾.

The finding of study regarding overall assessment of patients' knowledge; the findings reveals that patients in the study are showing poor level of knowledge. This result had agreed to a study was carried-out in Al-Basra Governorate the patients knowledge for medication was low ⁽¹⁹⁾.

The findings of the study regarding overall assessment of patients' medication adherence; the findings reveal that patients in the study are showing poor level of adherence (84%). This result had agreed to a study was carried-out in Al-Basra Governorate the patients adherence for medication was not adherence (58.7%) ⁽¹⁹⁾.

These findings showed that there is strong positive relationship between knowledge and adherence among patients at p-value = 0.001. This result had agreed

to a study was carried-out in Northwest Ethiopia there were the positive association between knowledge and adherence levels ⁽²⁰⁾.

Conclusions

According to the study findings, the study concluded the following:

1. level of patients' knowledge to clopidogrel therapy post percutaneous coronary intervention was low.
2. There is a lacking in the patients' adherence about clopidogrel therapy post percutaneous coronary intervention.
3. There was significant relationship between patient's knowledge with their adherence post percutaneous coronary intervention.

Recommendations

The study recommended that establishing an educational program regarding cardiac medications, such as Clopidogrel to increase patient's knowledge and improve their adherence after percutaneous coronary intervention.

Conflict of Interest

None.

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