

## Effect of Teaching Guidelines on Uremic Patients Regarding Arteriovenous Fistula Occlusion

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### Abstract

**Background:** ArterioVenous Fistula (AVF) is the preferred hemodialysis access type because it has better rates and fewer complications than other types. **The aim** of this study was to evaluate the effect of teaching guidelines on uremic patients regarding arteriovenous fistula occlusion. **Research design:** A quasi experimental design was utilized to meet the aim of study. **Setting:** This study was conducted in dialysis unit at Benha University Hospital and Benha Teaching Hospital. **The sample:** All available patients (purposive sample) at dialysis unit, the total sample included 100 patients. **Tools:** Two tools were used for data collection. I: questionnaire sheet for patients was used and consist of three parts. Socio demographic data for patient, medical history for patient and knowledge assessment. II: Patients' self-care practices regarding AVF prevention. **Results:** 31% of the studied patients were aged from 50-60 years, while 41% of them diploma education and more than half (58%) of them were males and not working. Regarding studied patients their knowledge about AV fistula pre and post guidelines of studied patients had in correct answers pre implementing guidelines. While post guidelines implementation of them were having correct answers. **Conclusion:** Less than third of the studied patients had good level of total knowledge during pre-guideline and more than three quarters of the patients had good level of total knowledge during post guideline. There was statistically significant relation between total knowledge and total self-practices scores about arteriovenous fistula. **Recommendation:** Develop and implement health education program for uremic patients to increase their knowledge about arteriovenous fistula and practices should be followed before and after dialysis session. Further researches are needed to study barriers and motivators' factors to encourage patients for maintain about fistula.

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**Key words:** Arterio Venous Fistula, Occlusion, Practice, Uremic patient.

### Introduction

Kidneys are vital organs of our body and are integral to maintain the body's homeostasis dysfunction of kidney can adversely affect every body system and may be fatal without effective management. The chronic kidney disease is a worldwide public health problem and this disease is growing. Dialysis is used to relieve manifestations of renal failure temporarily until regains kidney function or to

sustain life with irreversible kidney disease. The dialysis must continue for the rest in patient of life to control uremia and to physically prepare to receive a transplanted kidney (Salman et al., 2019). There are two different types of dialysis: - hemodialysis and peritoneal dialysis. Both do the work of the kidney but in a different way. During hemodialysis needles are used to access the

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blood is taken via tubing through a special filter which cleans the blood. It is then returned clean to the body. Peritoneal dialysis works inside the body using the peritoneal membrane to filter the blood. Peritoneal dialysis is performed every day at home either during the day using manual bags or at night using a machine **(Farouk et al., 2017)**.

Hemodialysis may improve quality of life and increase life expectancy but hemodialysis provides only about 10% of normal kidney function. The most common complications during hemodialysis are hypotension, cramps, nausea & vomiting, headache, chest pain and itching. Compliance with the diet, fluid limitations and taking medications should be appraised on regular basis dietary, fluid and sodium restriction, medications, care of arteriovenous fistula, how to deal with complications and warning signs, worry about marriage, having children and the inability of patients to do the activities of daily living are all problems of the hemodialysis **(Ghadam et al. 2016)**.

Vascular access is a way to reach the blood for hemodialysis. The access allows blood to travel through soft tubes to the dialysis machine where it is cleaned as it passes through a special filter, called a dialyzer. The three types of vascular access available for hemodialysis are arteriovenous fistulas, arteriovenous grafts, and central venous catheters, and each access type has advantages and disadvantages. An access is placed by a minor surgery, A fistula is made by joining an artery and vein in the arm, A graft is made by using a piece of soft tube to join an artery and vein in the arm and A catheter, a soft tube that is placed in a large vein, usually in the neck **(Allon, 2019)**. An Arteriovenous fistula is created most commonly in the fore arm with

anastomoses between an artery and a vein. This fistula provides for arterial blood flow through a vein. The arterial blood is essential to provide the rapid blood flow required for hemodialysis. The vein is accessed using two large gauge needles. The success rate of fistulas is not uniform among patient. An effective hemodialysis treatment is dependent on a well-functioning vascular access which has good blood flow, excellent patency, and allows easy and repetitive annulation with two needles **(Mohammed & Mamdouh, 2019)**.

Established AV fistulas require frequent routine monitoring to ensure continued patency. A failing AV fistula places the patient at risk for inadequate dialysis, which can lead to numerous complications and increased morbidity and mortality. A fistula is a lifeline and patient need to take care of it. Routine monitoring of AV fistulas by patients themselves can prevent all complications related to AV Fistula. Thrombosis, stenosis and infection are the three most prevalent complications of arteriovenous fistulas for dialysis **(Rashid et al., 2018)**.

Patients knowledge, attitude and care practice plays the foremost role in preventing complications of A V fistula that Patients must be educated to avoid IV annulation, taking blood pressure, tight compression bandage, excessive weight lifting, trauma, sleeping on the arm bearing AV fistula and taking proper hygienic measures along with exercise manual compression and the measures to be taken in case of hematoma formation like cold compression and hot fomentation and elevation of the arm. This knowledge can be imparted to the patients by proper counseling, pamphlets and educational programs before or at the time

of fistula formation (Iqbal, Shareef, Afzal, and Ashraf, 2018).

## **Subject & Methods**

**Aim of the study:** The aim of the study was to evaluate the effect of teaching guidelines on uremic patients regarding arteriovenous fistula occlusion.

### **Research hypothesis :-**

To achieve the aim of this study, the following research hypothesis was formulated:

H1-Patient's knowledge regarding arteriovenous fistula will be improved post teaching guidelines implementation than before.

H2-Patient's self-care management regarding arteriovenous fistula will be improved post teaching guidelines implementation than before.

### **Research design**

A quasi-experimental research design was utilized to meet the aim of the present study.

### **Setting:-**

This study was conducted in dialysis unit at Benha university hospital and Benha teaching hospital.

### **Subjects:**

### **Sampling type:-**

Convenient sample was used in this study.

### **Sampling size:-**

The total number of patients admitted to dialysis unit who have arteriovenous fistula not more than one year and patients who will under undergoing arteriovenous fistula operation during the six months. (100 patients) and agree agreed to participate in the study.

### **Tools**

#### **Tool one:**

A Structured patients' interviewing questionnaire .It was developed by the

researcher after reviewing the related literature. It was presented in simple Arabic structured items related to different aspect of assessment of patient's knowledge and it included four parts.

**First part:** Patients' demographic data: It concerned with assessment of patients' regarding age, gender, marital status, level of education, occupation, place of residence, monthly income, treatment costs and source of good water.

**Second part:** Patients' medical history: It concerned with the medical history of uremic patient with arteriovenous fistula and included:-

A- Past medical history:- which included seven questions; previous surgeries, smoking, co-morbid diseases, undergoing central venous catheter before fistula, undergoing fistula more than one, AV surgery complication and the current blood pressure.

B-Current medical history: - which included 3 questions; onset of disease, first session started and number of session per week.

**Third part:** Patients' Knowledge questionnaire: This questionnaire was developed by the researcher after reviewing the related literature. It was aimed to assess the patients' knowledge regarding disease. It involved the 27 items who as (definition of the arteriovenous fistula, types of fistula, indication of fistula, important of fistula for dialysis, procedures to maintain fistula correctly before and after dialysis, Problems occurs ,factors that Increase bleeding , procedures during bleeding ,Warning signs of inflammation, types of exercises for fistula and knowledge out precaution for AV fistula post-operative, causes, factors lead to AV occlusion.

#### **Scoring system:**

The scoring system for total knowledge assessment :- In this tool ,the right answers were

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given one score and the wrong were given zero score with total score 27, categorized as follow: Score < 70% was considered un satisfactory total knowledge, Score  $\geq$  70 % was considered satisfactory total knowledge, Reliability for total knowledge equal 0.87%.

### **Tool II:- Patients' self-care management:-**

This tool was developed by the researcher after reviewing the related literature. It was presented in simple Arabic structure items related to different aspect of assessment of patient's self-care and it included 18 items such as (wash arm with soap and water every day, wash arm with Betadine directly before access, not wear tight clothes, avoid heavy items on the arm, avoid sleeping on the arm, avoid measuring pressure from arm, check arm every day to make sure there is no redness, check arm every day to check for vibration, keep arm from any injury, maintain a clean and dry, do warm compresses every day, the hand should be raised on a high pillow, notify the nurse if feel pain in arm during session, go to the emergency if pulse in arm dis appear, Cold compression must be made 4hours after session ,warm compression must be made 4,5 times in second day of session, hair should not be removed).

### **Scoring system:**

In this tool, done were given one score and not done were given zero score. It was categorized as follow: Score < 70% was considered un satisfactory self-care practice, -Score  $\geq$  70 % was considered satisfactory self-care practice. Reliability for self-care practice equal 0.80%.

### **Content Validity of the tool:**

The tools were revised and ascertained by a group of five experts from medical surgical nursing department, faculty of nursing, Benha University (one Professor and four assistant professors). Their opinions were elicited

regarding the content, format, layout, consistency, accuracy and relevancy of the tools.

### **Reliability of the tools:**

The reliability was done by Cronbach's Alpha coefficient test which revealed that tool consisted of relatively homogeneous items as indicated by the moderate to high reliability of each tool. The internal consistency of knowledge was 0.87, and practice was 0.80%..

### **Ethical consideration:**

The research approval was obtained from the faculty ethical committee before starting the study. Verbal approval was obtained from the patients before inclusion in the study. The researcher clarified the objectives and aim of the study to patients included in the study before data collection. The researcher assured maintaining, anonymity and confidentiality of patient's data and it will be used for research purpose only. The patients were informed that they are allowed to choose to participate or not in the study and they have the right to withdraw from the study at any time.

### **Pilot study**

Pilot study was conducted on (10%) patients undergoing arteriovenous fistula in order to test the applicability of the study and the clarity of the developed tools. The pilot study also had served to estimate the time needed for each subject to fill in the question.

### **Procedure**

Before data collection, the purpose of the study was explained to the administrative personnel, an official request for permission of data collection was obtained by submitting a letter from the Dean of the Faculty of Nursing, Benha University to the administrator of

nursing directory in Benha to inform the directors of selected dialysis Centers to facilitate the investigator's work during data collection and allow her to meet the patients at previously mentioned settings.

Data were collected over each session started by a summary of the previous session and objectives of the new one. Taking into consideration, the use of Arabic language that suitable for patient's education level. The researcher was attended to the dialysis unit three days/ week from 9AM o'clock to 3PM o'clock.

Total number of sessions were (3) sessions , session (1) included definition of AV fistula, important, types of fistula and complications, session (2) included precautions about AVF after surgery ,factors increase bleeding and types of exercises, session(3) included self-care for fistula before and after dialysis for each group, the time for each session ranged between 30-45minutes. The patients divided in to 20groups, each group contains (5 patients) to acquire the related information. Each patient was supplemented with the booklet containing nursing guidelines in the first day of implementation.

At the end of each session, patients' questions were answered and discussed to correct any misunderstanding .Also they were informed about the time of the next session. Teaching methods were lecture, group discussion and brain storming regarding to media utilized were, handouts, pictures and booklet.

#### **Statistical Analysis:-**

The collected data was revised, coded and entered into an excel sheet on the computer.

Statistical analysis was fulfilled using the statistical package for social sciences (SPSS) version 20. Data were presented using descriptive statistics in the form of frequencies, percentages. Chi-square test(X<sup>2</sup>) was used for comparisons between qualitative variables to find out relations. Correlation coefficient (r) was used to test the relation between quantitative data. Statistical significance was considered as follow, P value > 0.05 non-significant, P value ≤ 0.05 significant, P value < 0.01 highly significant. Education and (58%) of them were males and had not work. Also the (76%) of studied patients were married and (73%) hadn't enough income, concerning treatment cost, (68%) had a decision expense. (60%) of them had lived in rural areas. In addition to (61%) of them weren't owned source of water.

#### **Results:**

**Table (1)** shows the socio- demographic characteristics of the studied patients. It cleared that 31% of the studied patients were aged from50-60years, while 41% of them had diploma education and 58% of them were males and had not work. Also the 76% of studied patients were married and 73% hadn't enough income, concerning treatment cost, 68% had a decision expense. 60% of them had lived in rural areas. In addition 61% of them weren't owned source of water.

**Table (2)** describes distribution of studied patient knowledge score regarding indications of fistula, importance of fistula for dialysis, procedures to maintain fistula healthy before dialysis and factors that increase bleeding and fistula failure, percentage in correct answers among patients were 98%, 97%, 89% and 93% respectively. While post teaching guidelines implementation, they were having correct answers regarding these item 94%,88%,79%

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and 88%.With highly statistically significant differences between most of items pre and post guideline implementation [ $p < 0,05$ ].

**Figure (1)** shows that 21, 0% of the studied patients had satisfactory knowledge pre nursing guidelines implementation, while 62.0% of them had satisfactory knowledge post nursing guidelines implementation.

**Figure (2)** shows that less than half of the studied sample [46%] had satisfactory self-care practices pre teaching guideline implementation, while nearly two thirds of them [63%] had satisfactory self-care practices post teaching guidelines implementation.

**Table (3)** notes that there was highly statistical significant relation between age, sex, occupation, marital status, residence and total knowledge pre guideline implementation with [ $p < 0,005$ ], while there was no statistically significant relation between socio-demographic characteristic and total knowledge score post guideline implementation expect in educational level there was highly statistical relation [ $p > 0,005$ ].

**Table (4)** demonstrates that there was high statistically positive correlation between total knowledge and total self- care practices in pre and with [ $p < 0, 05$ ].

**Table [1]** Frequency distribution of studied patient regarding socio-demographic characteristics [n=100)

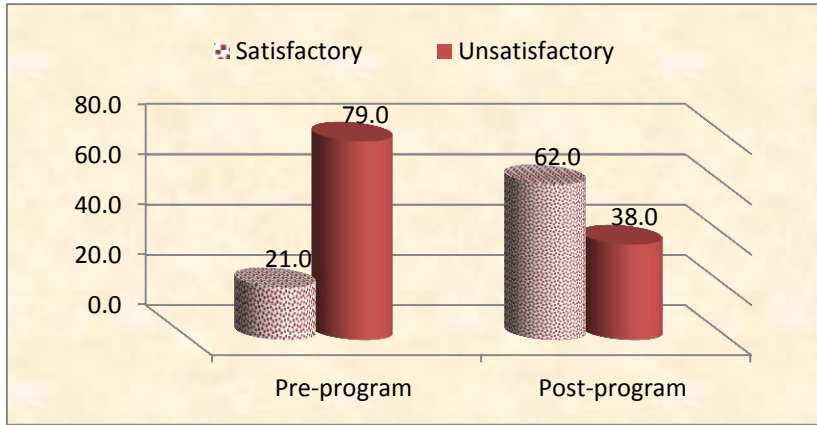
<b>Demographic characteristics</b>	<b>No</b>	<b>%</b>
<b>Age in years</b>		
18 > 30	17	17.0
30> 40	28	28.0
±40> 50	24	24.0
<b>50 ≥60</b>	31	31.0
<b>Mean ±SD</b>	<b>41,8± 11,79</b>	
<b>Sex</b>		
Male	58	58.0
Female	42	42.0
<b>Educational level</b>		
Illiterate	27	27.0
Read and write	24	24.0
diploma education	41	41.0
University education	5	5.0
Others	3	3.0
<b>Occupation</b>		
Work	19	19.0
Not work	42	42.0
House wife	11	11.0
Retired	28	28.0
<b>Marital status</b>		
Married	76	76.0
Absolute	12	12.0
Widower	5	5.0
Single	7	7.0
<b>Monthly income</b>		
Enough	27	27.0
Not enough	73	73.0
<b>treatment costs</b>		
A decision on the state's expense	68	68.0
health insurance	29	29.0
Cost	3	3.0
<b>Residence</b>		
Urban	34	34.0
Rural	66	66.0
<b>Source of good water</b>		
Yes	39	39,0
No	61	61,0

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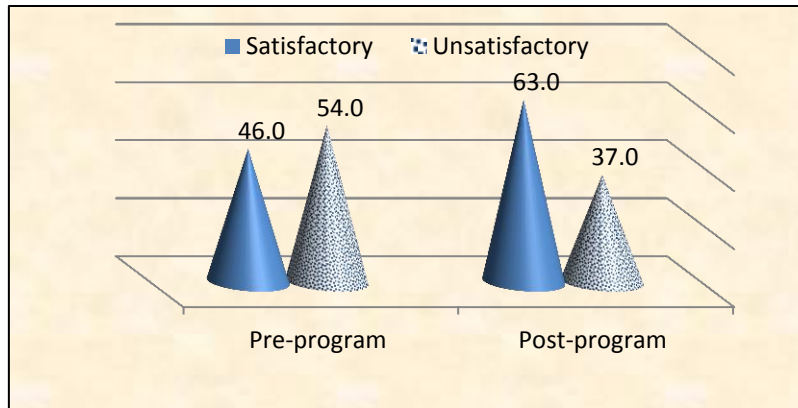
**Table [2]** Distribution studied patient regarding their knowledge pre and post teaching guideline implementation [n=100].

Knowledge items	Pre teaching guideline implementation				Post teaching guideline implementation				X <sup>2</sup>
	Correct		In correct		correct		In correct		
	No	%	No	%	No	%	No	%	
Definition of the fistula	8	8.0	92	92.0	71	71.0	29	29.0	14.62
Types of fistula	9	9.0	91	91.0	62	62.0	38	38.0	23.39
Indication of fistula	2	2.0	98	98.0	94	94.0	6	6.0	2.08
Important of fistula for dialysis	3	3.0	97	97.0	88	88.0	12	12.0	5.83
procedures to maintain fistula healthy before dialysis	11	11.0	89	89.0	79	79.0	21	21.0	3.72
Procedures to maintain fistula after dialysis	30	30.0	70	70.0	55	55.0	45	45.0	4.80
Problems occurs and inform doctor	15	15.0	85	85.0	78	78.0	22	22.0	1.62
Factors that Increase bleeding and lead to fistula failure	7	7.0	93	93.0	88	88.0	12	12.0	1.45
Necessary procedures during bleeding	9	9.0	91	91.0	80	80.0	20	20.0	4.88
Warning signs of inflammation	46	46.0	54	54.0	36	36.0	64	64.0	6.54
Types of exercises for fistula	41	41.0	59	59.0	38	38.0	62	62.0	8.82
Time to start special exercises of fistula	26	26.0	74	74.0	50	50.0	50	50.0	12.22
Exercise for humorous	16	16.0	84	84.0	73	73.0	27	27.0	3.58
Exercise for the forearm	28	28.0	72	72.0	60	60.0	40	40.0	3.20





**Fig [1]** Frequency Distribution of studied patients regarding total knowledge pre and post guideline



**Figure [2]** Distribution of studied patients regarding their total self-care practices pre and post teaching guideline implementation.

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**Table [3]** Relation between total knowledge and socio-demographic characteristics of studied patient pre and post teaching guideline implementation

	total knowledge pre teaching guideline implementation				X <sup>2</sup>	p-value	Total knowledge post teaching guideline implementation				X <sup>2</sup>	p-value
	Unsatisfactory [n=79]		Satisfactory [n=21]				Unsatisfactory [n=38]		Satisfactory [n=62]			
	No	%	No	%			No	%	No	%		
<b>Age</b>												
18 > 30	11	13.9	6	28.6	11.92	0.008	7	18.4	10	16.1	2.38	0.497
30 > 40	18	22.8	10	47.6			9	23.7	19	30.6		
40 > 50	20	25.3	4	19.0			12	31.6	12	19.4		
50 ≥ 60	30	38.0	1	4.8			10	26.3	21	33.9		
<b>Sex</b>												
Male	52	65.8	6	28.6	9.45	0.002	21	55.3	37	59.7	0.188	0.664
Female	27	34.2	15	71.4			17	44.7	25	40.3		
<b>Educational level</b>												
Illiterate	22	27.8	5	23.8	3.21	0.523	11	28.9	16	25.8	14.7	0.005
Read and write	17	21.5	7	33.3			4	10.5	20	32.3		
diploma education	32	40.5	9	42.9			20	52.6	21	33.9		
University education	5	6.3	0	0.0			0	0.0	5	8.1		
Others	3	3.8	0	0.0			3	7.9	0	0.0		
<b>Occupation</b>												
Work	12	15.2	7	33.3	6.36	0.095	4	10.5	15	24.2	6.19	0.102
Not work	32	40.5	10	47.6			21	55.3	21	33.9		
House wife	9	11.4	2	9.5			5	13.2	6	9.7		
Retired	26	32.9	2	9.5			8	21.1	20	32.3		
<b>marital status</b>												
Married	63	79.7	13	61.9	7.129	0.068	31	81.6	45	72.6	2.041	0.564
Absolute	7	8.9	5	23.8			4	10.5	8	12.9		
Widower	5	6.3	0	0.0			2	5.3	3	4.8		
Single	4	5.1	3	14.3			1	2.6	6	9.7		
<b>Monthly income</b>												
Enough	24	30.4	3	14.3	2.18	0.14	10	26.3	17	27.4	0.015	0.904
Not enough	55	69.6	18	85.7			28	73.7	45	72.6		
<b>Residence</b>												
Rural	48	60.8	18	85.7	4.604	0.032	23	60.5	43	69.4	0.818	0.366
Urban	31	39.2	3	14.3			15	39.5	19	30.6		

**Table [4]** Correlation between total knowledge and total self-care practices regarding AV fistula occlusion pre and post teaching guidelines implementation.

		Total knowledge			
		Pre		Post	
		r	p-value	r	p-value
<b>Total self-care practices</b>		0.34	0.000**	0.22	0.02*

**Discussion**

Hemodialysis is an important clinical mean of extending the survival of patients with end stage renal disease (ESRD) and its purposes are undergoing changes to some extent as developments are achieved in modern medical technology. Hemodialysis also aims to gradually change patients’ awareness of survival, improve their self-care and quality of life (QOL).An arteriovenous fistula (AVF) is the preferred hemodialysis access type ,created most commonly in the forearm with anastomoses between an artery and a vein (Wang et al., 2019).

Regarding demographic characteristics of the studied patients, this study showed that majority of the studied patients aged revealed that nearly one third of the studied patients their age ranged from50-60years. From the researcher's point of view, this result may be because kidney naturally deteriorates with age and kidney filtration begins to fall after the age of 40. Also, may be due to changes in immunity system and chronic disease that occur with advanced age. This result was agreed with the result of Salman et al., (2019) who study was about "The effectiveness of instructional module on self-care practices of arteriovenous fistula among hemodialysis patients" and reported that the majority of patients were above 51 years in their study.

This finding was also similar with Galal et al., (2017), who study was about "Effect of teaching guidelines on performance for patients with end stage renal disease treated with hemodialysis" and reported that the mean age for study subjects was (41,7±13,2) years. Regarding gender, the current study revealed that more than half of studied patients were males. From the researcher's point of view, this result may be because patients were more common in males, because posterior urethral valves, the most common birth defect leading to CKD, occur only in boys. Many individuals with congenital kidney disease such as dysplasia or hypoplasia. Also, males have more severe disease than females, the protective effects of estrogens in women and the damaging effects of testosterone might cause kidney disease faster in men than in women. This finding agreed with Sousa et al., (2017) who study was about "Self-Care on Hemodialysis with the arteriovenous Fistula therapeutic in Assuit university hospital", and reported that more than half of the studied patients were males. Regarding to education, the results of the present study revealed that more than one third of studied patients had diploma education. This finding agreed with Sousa et al., (2017), who reported that more than one third of the studied patients had diploma education. Regarding to current medical history, the findings of the present study showed that the onset of disease

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in nearly two thirds of patient was from nine month to one year. This result was agreed with the result of **Farouk et al., (2017)**, who reported that the onset of disease in nearly two thirds of patient was from nine month to one year.

Regarding past medical history, the finding of the present study showed that two thirds of patient performed surgery in the past and more than half of patients were performed AV fistula more than once. From the researcher's point of view, this might be because failure of fistula related to lack of knowledge about fistula care. The finding supported with study done by **Yildiz, (2020)** about "The efficacy of percutaneous transluminal angioplasty for the endovascular management of arteriovenous fistula dysfunction: a retrospective analysis in patients with end-stage renal disease" acıbadem University, Istanbul, Turkey and reported that two thirds of subjects was high risk for AVF failure.

Regarding comparison of patient's knowledge between pre and post teaching guidelines about arteriovenous fistula, the present study revealed that most of studied patients had in correct answers pre implementing guidelines related to indications of fistula, importance of fistula for dialysis, procedures to maintain fistula healthy before dialysis and factors that increase bleeding and fistula failure, while post guideline implementation, there were having correct answers regarding these items. Also there were highly statistically significant differences between most of items pre and post guideline implementation ( $p < 0.05$ ). This result was in agreement with the result of **Farouk et al., (2017)**, who revealed that there were high statistical significant differences between knowledge mean score for study subjects and in

total knowledge score of the study after implementing the teaching guidelines. Regarding to patient's knowledge about precaution for arteriovenous fistula, the present study revealed that most of studied patients had incorrect answers related to necessary precaution of pre implementing guidelines regarding (keep the wound area clean, avoid wearing tight clothes, avoid sleeping on the arm and avoid taking blood samples). While post implementing guidelines they had correct answers related to these items with highly statistically significant differences between pre & post guidelines implementation with ( $p < 0.001$ ).

This result was agreed with the result of **Shareef et al., (2018)**, who study was about "Access site, pre and post dialysis AVF cleansing and disinfection of King Edward Medical University, and reported that the least well-known precautionary measures to be taken for arteriovenous fistula care were to (avoid taking blood samples, intravenous line on the arm bearing AV fistula to avoid trauma and avoid wearing tight clothes).

Regarding to patient's self-care practices pre and post teaching about arteriovenous fistula, the present study revealed that nearly two thirds of studied patients had not done self-care practices regarding (doing warm compresses every day, cold compression (4hours) after session and warm compression in second day) in pre implementing teaching guidelines. This result was supported with the result of **Roy et al., (2017)** who study was about "effectiveness of structured teaching program on self-care among patients undergoing hemodialysis" and reported that majority of patients had poor practice in pre-test level of practice . Concerning relation between socio-demographic characteristics and total patients'

knowledge. It is noted that there was highly statistical significant relation between age, sex, occupation, marital status, residence and total knowledge in pre guideline implementation with  $p < 0.005$ . While there was no statistically significant relation between demographic characteristic and total knowledge score in post guideline implementation except in educational level there was highly statistical relation  $p = 0,005$ . knowledge.

Concerning relation between socio-demographic characteristics and total self-care practices pre and post guidelines implementation. It's noted that there was highly statistical significant relation between educational level, social status, monthly income and total self-care practices pre guidelines implementation. While there was no statistically significant relation between demographic characteristics and total self-care practices post guideline implementation except in monthly income there were highly statistical relations.

Concerning correlation between total knowledge and total self-care practices regarding fistula pre and post guidelines implementation. It's noted that there was high statistically positive correlation between total knowledge and total self-care practices in pre and post guideline implementation. From the researcher's point of view, the patients should be informed about all information that related to the arteriovenous fistula and its self-care practice for all lifestyle about (AVF) that should be changed to reduce the risk factors and preventing future complication.

### **Conclusion**

Approximately less than one third of the patients had satisfactory knowledge in pre guidelines teaching. In addition more than two

thirds of the patients had satisfactory knowledge post guidelines teaching. More than one third of the patients had unsatisfactory practices during pre-guidelines teaching. While, more than two thirds had satisfactory practices during post guidelines teaching. There was highly statistically relation between total knowledge and socio-demographic during pre-guidelines teaching while, there was statistically relation between socio-demographic and total practices care during pre-guidelines teaching. There was negative relation between total practices and socio-demographic during post guidelines teaching. And there was statistically relation between total practices and history of disease during pre-guidelines teaching. While, there was negative relation between total practices and history of disease during post teaching guidelines.

### **Recommendations**

- Develop and implement teaching guidelines program for uremic patients to increase their knowledge about arteriovenous fistula occlusion and practices should be followed to man manage fistula occlusion.
- Further researches are needed to study barriers and motivators factors to encourage patients to avoid complications to maintain occlusion.

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## تأثير دليل إرشادي علي مرضي الغسيل الكلوي فيما يتعلق بإنسداد الوصله الشريانيه الوريديه

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تعد الوصله الشريانيه الوريديه هي أفضل طريقه للمرضي الذين يتلقون الغسيل الكلوي الدائم , لذلك هدفت هذه الدراسه إلي تقييم تأثير دليل إرشادي علي مرضي الغسيل الكلوي فيما يتعلق بإنسداد الوصله الشريانيه الوريديه في مدينه بنها. وقد أجريت الدراسه في وحدة الكلي الصناعيه في مستشفى بنها الجامعي ومستشفى بنها التعليمي علي ١٠٠ حاله من مرضي الغسيل الكلوي. حيث كشفت النتائج عن وجود تحسن في مستوي معلومات المرضي وممارسات العنايه الذاتيه فيما يخص الوصله الشريانيه الوريديه. كما أوصت الدراسه بأهميه إجراء برنامج إرشادات تعليميه لمرضي الغسيل الكلوي وإجراء كتيب عن ممارسات الرعايه الذاتيه للمرضي المصابين بالوصله الشريانيه الوريديه في مراكز الغسيل الكلوي مما لها تأثير إيجابي للحفاظ علي الوصله الشريانيه الوريديه من الأنسداد.