

**Effect of Nursing Guidelines on Reducing Post-Operative  
Arteriovenous Fistula Complications among  
End Stage Renal Disease Patients**

**Thesis**

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## Summary

Arteriovenous fistula (AVF) is commonly used as vascular access for patients who require hemodialysis. AVF complications are a serious clinical problem, and they are associated with high rates of morbidity and mortality, prolonged hospital stay, and increased medical treatment costs. Patients play a critical role in the quality of health care today. Improving Patients' knowledge results in Patients' high self-efficacy when providing AVF maintenance care, and it is important that the Patients feel capable of providing evidence-based care.

Patients with high self-efficacy will structure the situation of hemodialysis treatment, and affect AVF outcomes. Hemodialysis patients are a unique population, and their survival depends on the quality of hemodialysis treatment and the responsibility of health care providers, particularly registered dialysis nurses, in protecting patients by providing high-quality care. Patients put a trust in the registered dialysis nurses who need to guard that trust. Therefore, the aim of this study was to evaluate the effect of implementing nursing guidelines on reducing post-operative arteriovenous fistula complications among end stage renal disease patients through . .

### **Aim of the study:**

Was to evaluate the effect of implementing nursing guidelines on reducing post-operative arteriovenous fistula complications among end stage renal disease patients through :

1. Asses needs of the studied patient.
  2. Develop nursing guidelines for post-operative arteriovenous fistula patients.
  3. Implement nursing guidelines for post-operative arteriovenous fistula patients.
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4. Evaluate the effect of implementing nursing guidelines on reducing post-operative arteriovenous fistula complications among end stage renal disease patients.

### **Research Hypothesis:**

At the end of the study: Post – operative patients with arteriovenous fistula who will receive the designed nursing guidelines will have less complications than those patient who will not receive this guidelines as measured by observational check list of post-operative arteriovenous fistula clinical outcome & knowledge assessment sheet.

### **Design:**

A Quasi-experimental research design was utilized in this study.

### **Setting:**

This study was carried in Surgical & Hemodialysis unit at El-Fayoum University Hospital.

### **Subjects:**

A purposive sample composed of 60 adult post-operative arterio venous fistula patients from both genders which were randomly and alternatively divided into two equal study & control groups (30 for each).

Those patients were selected according to the following criteria:

### **Inclusion criteria:**

- Adult patient of both gender
- Immediate post-operative arterio venous fistula patients

### **Exclusion criteria**

- Patient with liver disease.
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- Patient with diabetes.

**Tools for Data Collection:**

**Tools for data collection:** **Tool (1)** Interview Patient's assessment sheet tool consists of two parts; part one covers socio-demographic assessment while part two covers health relevant information. **Tool (2)** Patient's knowledge assessment sheet. **Tool (3)** Patient's practices observational checklist. Structured interviews and direct observation were utilized for data collection. **Tool (4):** observational check list of post-operative arterio venous fistula clinical out come

***Pilot study:***

A pilot study was conducted on group 6 patients in order to test the clarity and applicability of the study tools subjects.

***Result:***

The main study findings can be summarized as the following:

- One third( 33.3% ,30%) for control and study group respectively were having 45-55year with the mean age(43.4  $\pm$ 9.9), (46.1  $\pm$  10.4)respectively , that two third (60%) in both studied groups were females, more than two third (60%, 63.3 %) for control and study group respectively were married, more than one third (46.7%, 40 %) for control and study group respectively were illiterate and( 50%, 60 %) for control and study group respectively were not occupied with no statistically significant difference at p value>0.05.
  - There is a highly statistically significant difference between studied subjects pre and post implementation of guideline regarding as regard total knowledge about vascular access, AV
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fistula Complications , Prevention and Care for AV fistula  
C o m p l i c a t i o n .

- There were improvement in total level of patient' practice pre and post implementation of guideline regarding patient assessment of AVF site, changing AV Fistula dressing, and role of patient for AVF complications
- There is a statistically significant difference between studied subjects post implementation of guideline regarding AVF complications
- There was no statistically significant relationship between socio demographic characteristics and knowledge pre implementation of guidelines while there was statistically significant relationship between socio demographic characteristics (level of education) and knowledge post implementation of nursing guidelines.
- There were no statistically significant relationship socio demographic characteristics of patients in study group and practice pre /post implementation of nursing guidelines.
- There were statistically significant relation between socio demographic characteristics (gender and age in years) of patients in study group and total complications after 15 day post implementation of guidelines also that there were relation between socio demographic characteristics (age in years and level of education) of patients in study group and total complications after 6weeks post implementation of guidelines.
- There were highly statistically significant relation between patient's knowledge and their practice post guidelines implementation.

**Based on the results of the present study, the following can be concluded:**

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- Based on the results of the current study it can be concluded that, all post-operative AVF patients in study group had satisfactory level of knowledge regarding AVF management and all of them had a satisfactory level of practice provided to AVF. This indicated a real gap between knowledge and practice in patient in study group as compared patients in control group. This can be explained as they had no training courses about management of AVF and the need of implementing nursing guidelines on reducing post-operative arteriovenous fistula complications among end stage renal disease patients.

***From the study finding we could recommend the following:***

- Based on the findings of this study, the following recommendations were made:
- Establishment of teaching classes in hemodialysis unit to enrich the theoretical & practical information about the care of hemodialysis arteriovenous fistula.
- Patients should be trained, retrained and involved in care to learn proper management of arteriovenous fistula.
- Ongoing clinical and educational competency evaluation should be carried out for Patients in all clinical settings.

**Recommendations for further researches:**

- Replication of the study on a larger sample and on different geographical settings to allow generalization of findings.
  - Educational program needs to be done for patients who suffer from end stage renal kidney disease throughout the pre-dialysis and continued after kidney maintenance with their
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caregivers to improve their knowledge and skills about the disease and its treatment.

- A simple booklet of recommendations of care for hemodialysis patients perform hemodialysis should be located in all event to be submit to a newly diagnosed with end stage renal disease.

