

Adherence of patients after Kidney Transplantation toward Therapeutic Regimen

Thesis

Submitted for Partial Fulfillment of the Requirement of

Master Degree in

(Medical Surgical Nursing)

By

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Abstract

Kidney transplantation has become the treatment of choice for most patients with end stage renal disease. Non –adherence is a major risk factor for rejection, allograft loss and death. The aim of this study was to assess adherence of patients after kidney transplantation toward therapeutic regimen. Two tools were used in this study: Tool I Patient structured interview questionnaire to assess demographic characteristics and medical history, Tool II questionnaire sheet for Patients' adherence toward therapeutic regimen after kidney transplantation. This study was conducted at the kidney transplant out-patient clinic of Urology and Nephrology center, Mansoura University. 3purposive samples of 90 adult patients perform kidney transplantation from both sex which divided into 3 groups. The first group was 3months period post transplantation, the 2nd group was after 6months post transplantation and the 3rd group was after one year post transplantation. The finding of this study revealed that: The mean age for the patients included in the study was 31.6 ± 9.8 for group1, 33.0 ± 11.3 for group2 and 31.3 ± 8.9 for group3, ranged from 20-40 years, the majority (83.3%) in group1, more than two third (70%, 66%) in group1and group2 respectively were males. Less than half (46%) in group1, more than half (56%) in group2 and more than two third (73%) in group3 were married. (100%) in group1, the most (90%) in both group2 and group3 adhere to drug regimen. The study concluded that, the majority (90%, 80%) in group1and group2 respectively had partial adherence to therapeutic regimen while 100% in group3 had partial adherence to therapeutic regimen and adherence with therapeutic regimen in patients after kidney transplantation differed significantly by the period after transplantation. This study recommended that, intensive assessment for patient's adherence before and after transplantation in order to identify causes of non-adherence to overcome it.

Keywords: kidney transplantation, adherence.

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LIST OF ABBREVIATIONS

• ATG	: Anti -Thymocyte Globulin
• ATN	: Acute Tubular Necrosis
• BMI	: Body Mass Index
• BUN	: Blood Urea Nitrogen
• CBC	: Complete Blood Count
• CHF	: Congestive Heart Failure
• CKD	: Chronic kidney disease
• CLD	: Chronic Liver Disease
• CMV	: Cytomegalovirus
• COPD	: Chronic Obstructive Pulmonary Disease
• CT	: Computed Tomography
• CVD	: Cardiovascular Disease
• CVP	: Central Venous Pressure
• DM	: Diabetes Mellitus
• EBV	: Epstein - Barr virus
• ECG	: Electro Cardio Gram
• ESRD	: End Stage Renal Disease
• GFR	: Glomerular Filtration Rate
• GIT	: Gastro Intestinal Tract
• HBV	: Hepatitis B Virus
• HCV	: Hepatitis C Virus
• HIV	: Human Immunodeficiency Virus
• HTN	: Hypertension
• IL2	: Interleukin2 Inhibitors
• MLC	: Mixed Lymphocyte Culture
• MRA	: Magnetic Resonance Angiography
• MRI	: Magnetic Resonance Imaging
• NPO	: Nothing Per Osse
• ROM	: Range Of Motion
• SLE	: Systemic Lupus Erythematosus
• SPSS	: Statistical Package For Social Science
• STD	: Sexual Transmitted Disease
• US	: Ultrasound
• USRDS	: United State Renal Data System
• WBC	: White Blood Cell

OPERATIONAL DEFINITION

Kidney transplantation is a surgical procedure in which a kidney is removed from one person {donor} and placed into the body of a person suffering from renal failure {recipient}.

Adherence is the extent to which a person's behavior – taking medication, following a diet, and/or executing lifestyle changes corresponds with agreed recommendations from a health care provider.

Therapeutic regimen is a systemic treatment course or plan directed toward improvement of health, such a plan is likely to consider drugs, diet exercise, follow up, self monitoring skills, prevention and early detection of complications.

INTRODUCTION

Kidney transplantation remains the treatment of choice for persons in end stage renal disease. More solid organ transplants are being done throughout the world with life expectancy in some kidney recipients to exceed 40 years (**Ward, 2009**). Kidney transplantation is a surgical procedure in which a kidney is removed from one person {donor} and placed into the body of a person suffering from renal failure {recipient} (**Raja, 2009**). On the other hand kidney transplantation is recommended for person who has serious kidney dysfunction, and will not be able to live without dialysis or transplant (**American Association of Kidney Patients, 2011**).

Data from the United State Renal Data system (**USRDS**) (**2011**), indicate that survival after renal transplantation is significantly better than that of patients treated with dialysis and the survival of kidney grafts has improved steadily over the past 3 decade (**United States Renal Data System, 2011**).

An advantage of kidney transplantation when compared with dialysis is that it reverses many of pathophysiological changes associated with renal failure when normal function is restored, it also eliminates the depends on dialysis and the accompanying dietary and lifestyle restrictions. Transplantation is also less expensive than dialysis after the first year (**Neyhart, 2008**).

Therapeutic regimen of renal transplant recipients consists of medication taking, infection prevention, smoking cessation, clinic visit attendance, and of following guidelines concerning alcohol intake, diet and exercise (**Lennerling and Forsberg, 2012**).

The Nurse must consider many issues facing the transplant recipient such as medication management, infection prevention, chronic disease management, fluid balance, urine output, and psychological issues that surround receiving a transplant. In addition, the nurse is in a unique role to identify non-adherence as well as risk factors of developing these behaviors and to construct methods for intervening and supporting those patients. This requires knowledge about the adherence patterns of the kidney transplant recipients in each community (**EL-Saadany, Gheith, Abuo Donia, and Salem, 2008**).

Adherence or compliance has been defined as the “active, voluntary, and collaborative involvement of the patient in a mutually acceptable course of behavior to produce a therapeutic result. This definition implies that the patient has a choice and that both patients and providers mutually establish treatment goals and the medical regimen (**Okoro and Ngong, 2012**).

Adherence classified into 3 degrees including good, average, and poor In addition; the factors associated with Adherence divided into internal and external factors. The internal factors are patient’s characteristics such as age, social background, values, attitudes, and emotions caused by the disease. External factors include impact of education, the relationship between the patient and the healthcare personnel, and the support from the family (**EL-Saadany et al., 2008**)

Significance of the study:

Chronic kidney disease (CKD) is a worldwide public health problem. The overall rate of end -stage renal disease (ESRD) in worldwide is approximately 735 per million in populations. As the end-stage population continues to increase projection estimate that the current

population of 372,407 will exceed 660,000 by the year 2012 (**McCullough, Keith, Meyer, Stock, Brayman and Leichtman, 2009**). It estimated that 19 million people in the United States have CKD and over 485,000 people require dialysis or kidney transplantation in order to stay alive (**United States Renal Data System, 2011**).

Renal failure is the most common problem in Egypt. The number of patients is increasing; in Egypt 2010 were 300 per million in population and every patient's costs above 22,500 pound per year to have total cost of 700 million pounds annually in Egypt (**World Health Organization, 2012**).

The number of patients undergoing kidney transplantation is increasing every year. The Urology and Nephrology Center of Mansoura University Hospitals; which consider the biggest center in Egypt for kidney transplantation surgery; detected about 2360 cases of kidney transplantation from 1976 to 2011(**Annual Statistical Record of Urology and Nephrology Center on Mansoura University Hospitals, 2012**).

Adherence is a very important issue in medical and nursing Care of kidney transplant recipients and non-adherence results in disease progression, increased health care costs, rejection, allograft loss and even premature death (**Wien, 2012**) so teaching patients and families about the importance of adhering to the therapeutic regimen is a critical nursing function. Many patients don't follow the regimen and are high risk for losing the transplanted kidney, work with the patient to identify ways to increase adherence to the therapeutic regimen (**Zarifian, 2009**) So this study will be conducted to assess adherence of patients after kidney transplantation toward therapeutic regimen .It is essential for such a

group of patients comply with the prescribed regimen to prevent complications and to save their life.

Aim of the Study:

The aim of this study is to assess adherence of patients after kidney transplantation toward therapeutic regimen.

Research Questions:

- Is patient after kidney transplantation adhere to his therapeutic regimen?
- Is patient adherence degree affected by the period after transplantation?

Review of Literature

Anatomy and physiology overview:

The urinary system comprises two kidneys, two ureters, bladder, and urethra. Its function is to excrete the waste products of metabolism in the form of urine (Lewis, Heitkemper, Dirksen, Camera and Bucher, 2011).

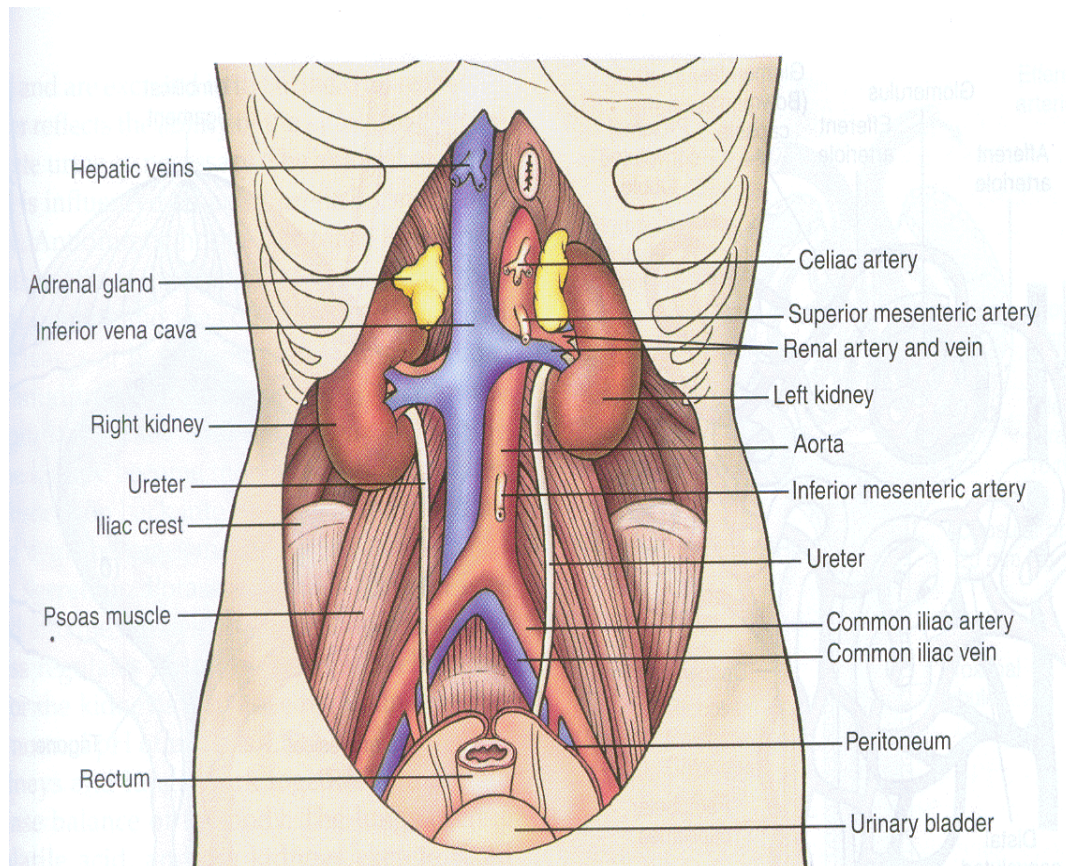


Fig (1): The kidney and related structure: Lewis et al., (2011).

The kidneys are a pair of brownish-red structures located retroperitoneally (behind and outside the peritoneal cavity) on the posterior wall of the abdomen from the 12th thoracic vertebra to the 3rd lumbar vertebra in the adult. An adult kidney weighs 113 to 170 gram and is 10 to 12 cm long and 6 cm wide and 2.5 cm thick. The right kidney is