



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



MONA MAGHRABY

Role of Pediatric Nurse Regarding Children's Needs Undergoing Hemodialysis Therapy

Thesis

*Submitted for Partial Fulfillment of Master Degree in
Pediatric Nursing*

Supervised by

Prof. Dr. Safy Salah Eldin El Rafay

Professor and Head of the Pediatric

Nursing Department

Faculty of Nursing, Ain Shams University

Prof. Dr. Hyam Rafat Tantawi

Professor of Pediatric Nursing

Faculty of Nursing, Ain Shams University

Dr. Mohammed Samy El Farsy

Lecturer of Pediatric

Faculty of Medicine, Ain Shams University

Ain Shams University

Faculty of Nursing

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List of Abbreviations

ARF	Acute Renal Failure.
AV	Arterio Venus.
CKD	Chronic Kidney Disease.
CRD	Chronic Renal Failure.
CRF	Chronic Renal Failure.
ESRD	End Stage Renal Disease.
GFR	Glomerulo Filtration Rate.
HD	Hemodialysis.

Introduction

The kidneys play key roles in body function, not only by filtering the blood and getting rid of waste products, but also by balancing the electrolyte levels in the body, controlling blood pressure, and stimulating the production of red blood cells. They get their blood supply through the renal arteries directly from the aorta and send blood back to the heart via the renal veins to the vena cava. (The term "renal" is derived from the Latin name for kidney) **(Baskin & Kongan, 2018).**

Kidney failure, known as renal failure or renal insufficiency, is a medical condition of impaired kidney function in which the kidneys fail to adequately filter metabolic wastes from the blood. The two main forms are acute kidney injury, which is often reversible with adequate treatment, and chronic kidney disease, which is often not reversible. The type of renal failure is differentiated by the trend in the serum creatinine; other factors that may help differentiate acute kidney injury from chronic kidney disease include anemia and the kidney size on sonography **(Yared & Ichikaua, 2016).**

Chronic Renal Diseases (CRD) defined as: “evidence of structural or functional kidney abnormalities (abnormal urine analysis, imaging studies, or histology) that persist for at least 3

months, with or without a decreased of glomerular filtration rate (GFR), less than 60 ml/minute/1.73 m² (**Webster et al., 2017**).

End stage renal disease is defined as total loss of kidney function, it is a common problem worldwide, and it is diagnosed by several laboratory and imaging diagnostic procedures. It occurs when a disease or condition impairs kidney function, causing kidney damage to worsen over several months or years. This includes; diabetes mellitus, hypertension, obstructed urine flow, kidney diseases, kidney artery stenosis, certain toxins, fetal developmental problem, systemic lupus erythematosus, overuse of some medications such as Non-Steroidal Anti-inflammatory Drugs (NSAIDs), and kidneys injury (**Kolvek, 2014**).

The goal of management of Chronic Renal Failure (CRF) in children is not only to prevent progression to ESRD but to fulfill the physiological, social and emotional needs of children to the best possible quality of life. It can achieve through early and appropriate treatment of reversible causes of chronic renal failure. It may help to achieve normal growth, development and periodic monitoring for rate of progression to end stage renal

disease to help plan for renal replacement therapy (**Arici, 2014**).

Medical management of chronic renal failure includes dialysis to remove waste products and extra water from the blood. There are two types of dialysis; hemodialysis and peritoneal dialysis. Kidney transplantation involves surgically placing a healthy kidney from a donor inside the children body that is used when there is no life threatening medical condition other than kidney failure (**Abraham & George, 2016**).

Hemodialysis is the most common method used to treat advanced and permanent kidney failure in pediatrics. Hemodialysis defined as a medical procedure that uses a special machine to filter waste products from the blood and to restore normal constituents to it again (**Kallenbach, 2015**).

Chronic hemodialysis has many complications as cardiovascular, nutritional, gastrointestinal, hepatic, endocrinal, complications of Arterio-Venous Fistula (AV), infections, nervous system & sleep disorders (**Webster et al., 2017**).

The dialysis nurse plays a vital role in providing information, care, support, understanding and therapeutic counseling to the pediatric patient and his family throughout the entire illness. The nursing management must be provided in

order to needs of children undergoing hemodialysis therapy for reducing the complications of renal function and the stresses of dealing with a life threatening illness (**James et al., 2014**).

Significance of study:

Chronic Renal Failure (CRF) is a major health problem among children. In Egypt, the estimated annual incidence of End Stage Renal Disease (ESRD) is around 74 per million, and the total prevalence of patients on dialysis is 264 Per Million Patient showing that the incidence of children with CRF on maintenance dialysis is continuously expanding during the last three decades (**Abou El Hana et al., 2015**).

Total children attended in pediatric conservative Nephrology Clinic and the pediatric conservative Nephrology Clinic of the Pediatric Dialysis unit at Ain Shams University Children Hospital in 2014 were 2397 children (**National Center for Health Statistics and National Center for Chronic disease prevention and Health Promotion, 2014**).

Hemodialysis is some life for children with CRF to replace the work of the kidney. So, hemodialysis is the major form of dialysis which is the first and most successful artificial organ technology used to treat advanced and permanent renal failure. There has been as significant improvement in

hemodialysis technique due to improve technology of dialysis machine (**Nelson et al., 2015**). Pediatric nurses play an important role in monitoring the physical status of children undergoing hemodialysis for evidence of physiologic imbalance, emotional changes and social safety needs of patients, and helping them understand and adjust to the care and changes in life style. So that, this study was done that nurses should assess the physical, emotional and social needs of children who having hemodialysis.

Aim of the Study

To assess role of pediatric nurse regarding children's needs undergoing hemodialysis therapy.

Research questions:

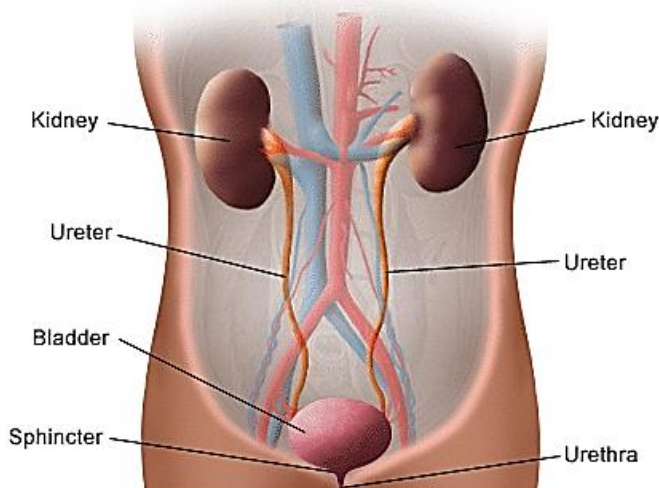
- 1- What are factors affecting role of pediatric nurse regarding children's needs undergoing hemodialysis therapy?
- 2- What are nursing role regarding needs of children undergoing hemodialysis therapy?

Overview about Anatomy and Physiology of Urinary System

The urinary system consists of two kidneys, bean shaped organs located in the dorsal abdominal cavity (figure 1), and accessory structures that filter blood and make urine. A ureter is a tube that carries urine from each kidney to the single urinary bladder, located in the inferior ventral pelvic cavity. The urinary bladder is basically an expandable muscle that holds the urine; the urethra is the tubing that transports urine from the bladder to the outside of the body (**National Institutes of Health, 2013**).

Figure (1): Urinary System

Front View of Urinary Tract



<https://www.hopkinsmedicine.org/health/wellness-and-prevention/anatomy-of-the-urinary-system>