Chapter I Introduction

## INTRODUCTION

Chronic renal failure (CRF) is a major health issue in various parts of the world. The number of patients suffering from end-stage renal disease (ESRD) is increasing in both developed and developing countries. Thus they are greatly expanding the need for chronic dialysis and renal transplantation (*Gutirrez & pertron, 2007*). CRF is usually the end result of a gradual progressive loss of renal function. Occasionally it also results from rapidly disease of sudden onset that gradually destroys the nephrons and eventually causes irreversible renal damage (*Alexander & Apling, 2004 and Schilling & Holmes, 2006*).

The most common causes of CRF are diabetes, malignant hypertension and glomerular nephritis. Unfortunately few symptoms develop until more than 75 % of glomerular filtration rate (GFR) has been lost. Then, the remaining normal parenchyma deteriorates progressively and symptoms worsen as renal function decreases (*Alexander & Apling*, 2004 and *Almaguer & Martinez*, 2005).

According to Smeltzer & Barre, (2004), CRF may progress to the fifth stage according to GFR. This depends on the laboratory from the level of creatinine (Cr) in the blood, which measure kidney function and its stage. Many authors had classified CRF into many different stages, but they all agreed that the final stage of CRF is called End Stage Renal disease (ESRD).

Haemodialysis (HD) is a process of cleaning the blood of accumulated waste products. It is used for patients with ESRD, renal failure or for acutely ill patients who require short- term dialysis (*Nettina*, 2010). It is the most common therapeutic method used to treat advanced and permanent renal

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failure. Also, it remains the major modality of Renal Replacement Therapy (RRT) in the world (American Journal of kidney disease (AJKD), 2006).

In addition to its therapeutic effects, HD can cause a number of complications. They are classified into acute and chronic complications. Acute complications are commonly occurring during routine HD treatments and called intradialytic problems. The most common intradialytic problems are hypotension or hypertension, muscle cramps, nausea and vomiting. The most common chronic complications are anemia and malnutrition (*Lewis & Dirksen, 2004*).

HD nurse is a skilled and competent professional specialized nurse experienced in caring for and maintaining high quality care for HD patients. The significant role of HD nurse in providing care to ESRD patient is clear including assessment of all body systems and evaluating each patient as obtaining weights at the same time daily, on the same scale. Assess the extent of the patient's anorexia, nausea, vomiting, diarrhea, and constipation, as well as taking measures to relieve these symptoms. Assist in drugs as ordered with consideration to defining renal function and monitoring for adverse effects arc very important. The nurse should also monitor clinical manifestations of infection, dehydration, overhydration, pruritus, edema, and changing neurologic status. Offering emotional support; arranging for family counseling, and teaching coping strategies should be considered (*Walsh &Watson*, 2002).

Therefore, there is clear need for more researches, which focus on improving the quality of nursing care for CRF patients undergoing HD to Chapter I Introduction

prevent and minimize the risk of HD complications that could be fatal with poor nursing care.

## **Significance of the Study**

ESRD is a major source of morbidity. The increase number of chronic dialysis patients is a significant health care issue in many developed as well as developing countries. The Prevalence of (ESRD) in the United States (2007) was527, 283 residents were under treatment as of the end of the calendar year. While, there were 87,812 deaths in all patients undergoing ESRD treatment (*United States Renal Data System (USRDS)*, 2009).

In Egypt, the incidence rate was 15000 to 20000 patient per million (*Daily Egypt News*, 2009). The incidence rate at Benha university hospital was 130 patient admitted at year 2010 while, the prevalence rate of patients undergoing HD treatment at Benha teaching hospital was 266 patient at the year 2008 and 270 patients at the year 2009, and 255 patients at the year 2010 while at 2011 the number of patients was 270 patients.

Chronic HD patients are subject to multiple physiological and psychological disturbances. Observation of patients undergoing HD showed that they are often concerned about the unpredictability of their illness and disturbance of their lives. They often have difficulty in handling a job and having children. Restrictions in food and fluid intake are often demoralizing to the patient and family. So there was a need to assess patients and to identify problems facing them & also nurses caring for them to improve their life and to prevent or at least minimize the complications. So this study will provide information about nurses' performance in these units and how they managed these complications.