

## INTRODUCTION

Nephrotic syndrome in children poses a huge health burden in term of prevalence morbidity and cost (*Eddy, 2008*). Nephrotic syndrome is kidney disease with proteinuria, hypoalbuminemia, and edema. Nephrotic-range proteinuria is 3 grams per day or more. On a single spot urine collection, it is 2 g of protein per gram of urine creatinine. Nephrotic syndrome and the development of new therapeutic strategies, in Egypt, its prevalence rate was 5 –6 % per 100.000 of children populations. (*Amr et al., 2009*).

Nephrotic syndrome is the most common chronic illness during childhood period; it tends to occur initially before age 3 years (*Moudgil, 2006*). The National Center for Health Statistics, Annual National Health Interview Survey from 2000-2005 determined that, the prevalence of nephrotic syndrome was increased in children from 4 to 16 years and in blacks compared with whites (*Niaudet, 2004*). Meanwhile, its prevalence is 2 times higher in boys than girls (*Churg, 2005*).

Although nephrotic syndrome is still difficult to define, the global strategy for nephrotic syndrome management and prevention report stated that, nephrotic syndrome is defined by presence of nephritic-range proteinuria, edema, hyper lipidemia and hypoalbuminemia (*Eddy, 2008*).

Nephrotic syndrome may be primary or secondary, primary nephrotic syndrome (the kidney is the principal organ involved) such as idiopathic (90%), glomerulonephritis (10%), and congenital; while secondary nephrotic syndrome occurs during the course of systemic diseases, Such as;

collagenosis, systemic lupus erythematosus, neoplasm drugs and infections. (*Beth, 2009*).

Nephrotic syndrome can influence all systems of the body such as. cardiovascular system (hypertension, hypovolaemia), respiratory system (pleural effusion and pulmonary oedema that cause respiratory distress), gastrointestinal tract (gut wall oedema that causes anorexia, vomiting, diarrhea, abdominal pain and ascitis) that cause abdominal distention, renal oliguria and haematuria). In general, children with nephrotic syndrome may develop lowest growth rates due to malnutrition, electrolyte imbalance, proteinuria and can occur by swelling around the eyes, legs and abdominal wall (*Eschbach, 2008 ; Jackson, 2009*).

Health kidneys keep protein in the blood, but damaged kidneys let it leak from the blood into the urine. Children with kidney disease may develop lowest growth rates, greatest loss of growth, anorexia, caloric malnutrition, electrolyte imbalance, swelling around the eyes, legs and belly because of the water left in the body, urine (in small amounts and contains protein) by manifestation may develop uremia such as; anemia, bleeding and platelet dysfunction (*Eschbach, 2009*).

Children with nephrotic syndrome and their families must receive education about effective disease management. Successful nephrotic syndrome management requires instructions about medication used and nephrotic syndrome symptoms by anyone providing care for the child with nephrotic syndrome. Successful outcomes of nephrotic syndrome management depend on the response of the child to treatment, amount of treatment required, number of symptom free days and history of atopy in the

family and child. A written discharge plan for the child with nephrotic syndrome will improve his compliance and reduce the frequency of medication errors (*Jackson, 2007*).

Nurses have a major role in teaching child and family to report immediately any changes in sensation, warmth, comfort or appearance of sitting and monitor blood values for white blood count, initiate strategies to prevent infection by use of aseptic technique, assess child appearance (color, activity and oedema), urinary output fluid intake and make balance between it to prevent hypovolaemia, haematuria, proteinuria , thrombosis, assess the program of treatment or diuretic therapy, steroid therapy and immunization to prevent hypovolaemic shock, hypertension, growth failure and iatrogenic complications (*Majewsk, 2007; and Daugirdas, 2008*).

### **Significance of the Study**

Nephrotic syndrome is a leading cause of chronic illness in children. It is responsible for significant proportion of school days lost (*Grimbert, 2006*). Because the prevalence of nephrotic syndrome among Egyptian children aged 3-15 years was estimated to be 8.2% and the prevalence of nephrotic syndrome in Qaliubia is from 2.5–3% maintaining optimum health is dependent upon compliance with invasive, regular therapies and follow up, so care providers including mothers are in need to be aware of various issues affecting compliance in children and effective control of nephrotic syndrome requires good level of knowledge and self management (*Morani., 2007*).