Epidemiology And Management Of Chronic Kidney Disease In The Pediatric Dialysis Unit At Ain Shams University Through 20 Years

(1991 – 2011)

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Abbreviations

CAKUT	Congenital Anomalies of the Kidneys and Urinary Tract
CAPD	Continuous Ambulatory Peritoneal Dialysis
CCPD	Continuous Cycling Peritoneal Dialysis
CDSS	Clinical Decision Support System
CIPD	Continuous Intermittent Peritoneal Dialysis
CKD	Chronic Kidney Disease
CPOE	Computerized Physician Order Entry
CRF	Chronic Renal Failure
CVD	Cardiovascular Disease
EHR	Electronic Health Records
ESA	Erythrocyte-Stimulating Agent
ESRD	End-Stage Renal Disease
GFR	Glomerular Filtration Rate
GN	Glomerulonephritis
HD	Hemodialysis
HIE	Health Information Exchange
HUS	Hemolytic-Uremic Syndrome
PD	Peritoneal Dialysis
RRT	Renal Replacement Therapy
SLE	Systemic Lupus Erythematosus
TTP	Thrombotic Thrombocytopenic Purpura

Introduction

Chronic kidney disease (CKD) and renal failure (RF) have been recognized as significant medical problems for most of the last 2 centuries and, until relatively recently, were uniformly fatal. Scientific and technologic improvements during the second half of the 20th century provided renal replacement therapy (RRT) as a life-sustaining option for many individuals who otherwise may have died. The impact of these medical advancements has been remarkable **(Gulati, 2011).**

Chronic Renal Failure (CRF) is relatively rare in children. Continuing progress in RRT has led to an improved prognosis of this condition, which continues to be a burden for the young patient, his family and society. In order to update RRT programmes, it is important to regularly collect basic demographic data on CRF (**Deleau et al., 1994).**

Pediatric End-Stage Renal Disease (ESRD) patients pose unique challenges to providers and the healthcare system, which must address not only the disease itself, but the many extra-renal manifestations that affect patients' lives and families **(USRDS, 2010).**

Globally, the prevalence of CKD stage II or lower in children is reported to be approximately 18.5-58.3 per million children. Disease prevalence is much lower than that in adults **(Gulati et al., 1999).**

Epidemiological information on the incidence and prevalence of pediatric CKD is currently limited, imprecise, and flawed by methodological differences between the various data sources. There are distinct geographic differences in the reported causes of CKD in children, in part due to environmental, racial, genetic, and cultural (consanguinity) differences. However, a substantial percentage of children develop CKD early in life, with congenital renal disorders such as obstructive uropathy and aplasia / hypoplasia / dysplasia being responsible for almost one half of all cases **(Warady et al., 2007).**

With the increasing knowledge about the mechanism and risk factors in the progression of chronic renal disease, the management of pre-end stage renal failure has become a challenge and an art. It is during this stage of the disease that the patient specifically needs