Introduction & Aim of the Work

Introduction

Insulin dependent diabetes mellitus is the most common paediatric endocrine disorder, affecting approximately 1 in 500 children under 18 years of age with the goal of maintaining blood glucose concentration as close to normal as possible, can delay the onset and slow the progression of complication of diabetes, including retinopathy, nephropathy and neuropathy (Behrman et al 1996).

Diabetic nephropathy is not a rare complication in the pediatric age group with a major sequelae in this early age (DE clue & Camposa 1994).

Nephropathy is the major life threading complication of insulin dependent diabetes mellitus. Nephropathy eventually occurs in 30% - 40% of all diabetic children and accounts for approximately 30% of all new adults cases of end stage renal diseases (Chiarelli et al 1997).

Diabetic nephropathy as manifested by persistent and clinically evident proteinuria, has long been considered as an irreversible process that predicts a rapid decline in renal function (Ellis et al 1996).

Diabetic nephropathy was defined as a median albumin excretion rate over 200 microgram/min in two or three urine collections obtained at baseline, and again at 2 – 4 years of follow-up (Ellis et al 1996).

It is established that plasma prorenin in an early marker of nephropathy in adolescents (Daneman et al 1994).

Repeated measurements of albumin excretion rate from the time of diagnosis may be useful in the early detection of patients who will develop microalbuminuria and ultimately overt diabetic nephropathy (Gilbert et al 1993).

The albumin excretion rate in the microalbuminuria range and its tracking (i.e. annual increase) are still considered reliable markers for prediction of later overt diabetic kidney disease. For that, screening programs for microalbuminuria and early intervention can substantially modify the natural

history of diabetic renal involvement and disease possibly reduce the incidence of end-stage renal failure (Chiarelli et al 1997).

Urine should be collected for assessment of microalbuminuria if present, microalbuminuria is suggestion of early renal dysfunction and indicates a high risk of progression to nephropathy (Diabetes Control and Complication Trials 1994).

Microalbumin and albumin/creatinine ratio in the early morning urine specimen had been used as a screening test for detection of early kidney affection in diabetic child (Shield et al 1995).

Also high serum level of IgA in patients with diabetes mellitus is an indicator chronic complications i.e. nephropathy, retinopathy and neuropathy (Rodrguez et al 1996).

There is tubular dysfunction in the early stage of insulin-dependent diabetes mellitus children even before there is any clinical evidence of nephropathy, and urinary N-acetyl-beta-D-glucosamunidase is a sensitive indicator of renal tubular injury (Hsiao et al 1996).

Glomerular and tubular Proteinuria provides a sensitive and cost-effective instrument for the non-invasive screening for renal involvement in patients with diabetes mellitus (Kordonouri et al 1997).

So, early surveillance and detection of this complication may save many cases. In this study we will use some parameters to detect cases of early diabetic nephropathy.

Aim of the Work

1) To detect cases at early diabetic nephropathy.
2) To put the screening program to detect early diabetic nephropathy in children.
3) To reduce as possible the incidence of end-stage renal failure of diabetic children.