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**MICROALBUMINURIA AS AN EARLY MARKER OF DIABETIC
NEPHROPATHY IN INSULIN -DEPENDENT CHILDREN
AND YOUNG ADULTS**

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Thesis

submitted for partial fulfilment of M.Sc. (ped)

By

ASHRAF ABDEL WAHAB SELIM

MB.B. CH.

Supervisors

Prof. Dr.

MOHAMED AWADALLA

Prof. of Pediatrics
Ein Shams University

Prof. Dr.

AHMED ABBASS RAOUF

Prof. and chairman
of Biochemistry Dep.
Faculty of Medicine and liver institue.
Menoufia University

Dr.

FARAHAT EL GAZZAR

Assi. Prof. of Pediatrics
Menoufia University

1992

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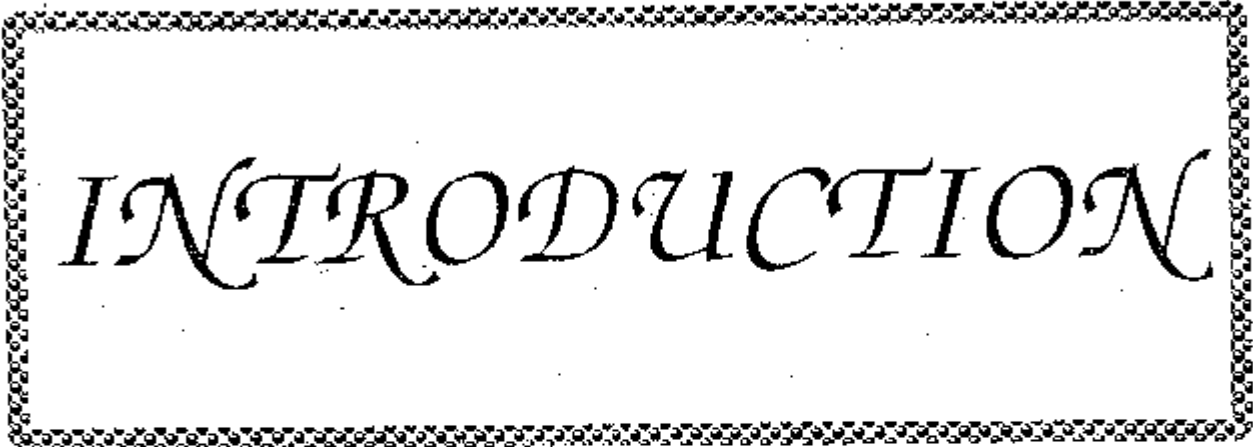
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INTRODUCTION

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Insulin-dependent diabetes mellitus is the most common endocrine-metabolic disease of childhood. It requires regular daily treatment with insulin, attention to nutrition and self monitoring of blood or urine glucose. In addition they face long-term complications including nephropathy, retinopathy and neuropathy (Nancy et al. 1986).

Diabetic nephropathy is one of the main causes of increased morbidity and mortality in patients with insulin-dependent diabetes.

The earliest functional abnormality in the diabetic kidney is renal hypertrophy associated with a raised glomerular filtration rate. The initial structural lesion in the glomerulus is thickening of the basement membrane and disruption of the protein cross-linkages that make the membrane an effective filter and progressive leak of protein into the urine occurs. (Gale, 1991).

The earliest evidence of this is "microalbuminuria" (i.e. amounts of urinary albumin so small as to be undetectable by dipsticks) which is followed by intermittent Albustix-positive proteinuria and then persistent proteinuria (Gale, 1991).

At this stage the plasma creatinine is normal but the average patient is only some 8-10 years from end-stage renal failure.

The proteinuria may become so heavy as to induce a transient nephrotic syndrome . A rise in plasma creatinine is a late feature that progresses to renal failure (Gale,1991).

Microalbuminuria as an early predictive sign of later development of diabetic nephropathy was detected in 22% of insulin-dependant diabetes (Hans-Henrik et al 1988). So urine monitoring is of great value in these cases as by time macroalbuminuria with advanced nephropathy will be inevitable .

*AIM OF
THE WORK*

AIM OF THE WORK

The aim of this work is to study the prevalence of "Microalbuminuria" in insulin-dependent diabetic children and young adults and to evaluate the relation between urinary albumin excretion and arterial blood pressure changes and correlating them with their diabetic control. This is may be of help in early detection and avoiding complications in these cases.

*REVIEW OF
LITERATURE*