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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



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# CLINICAL FACTORS ASSOCIATED WITH URINARY ALBUMIN EXCRETION IN TYPE II DIABETES

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Submitted for the Partial Fulfillment of Master Degree

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Internal Medicine

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# و المالية

قَالُواْ سُبْحَانَكَ لا عِلم لَنا إلا ما علَمتنا إنَّكَ أنستَ العَليمُ الحكيم

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To the spirit of My
Mother

### **ABBREVIATIONS**

ACE : Angiotensin converting enzyme.

AGEs : Advanced glycosylation endproducts.

BMI : Body mass index.

C. clearance: Creatinine clearance

DM : Diadetes mellitus

ESRD : End stage renal disease.

FBG : Fasting blood glucose.
G.Hb : Glycated hemoglobin

GFR : Glomerular filteration rate

Hb : Hemoglobin

HDL : High density lipoprotein.

IDDM : Insulin dependent diabetes mellitus.

IFG : Impaired fasting glucose.

LDL : Low density lipoprotein.

MAA : Macro-albuminuria
MIA : Miro-albuminuria

ml/min. : mililitre/minute.

NA : Normo-albuminuria

NIDDM: Non insulin dependent diabetes mellitus.

OGTT : Oral glucose tolerance test.

RPF : Renal plasma flow. S. Creatinine : Serum creatinine.

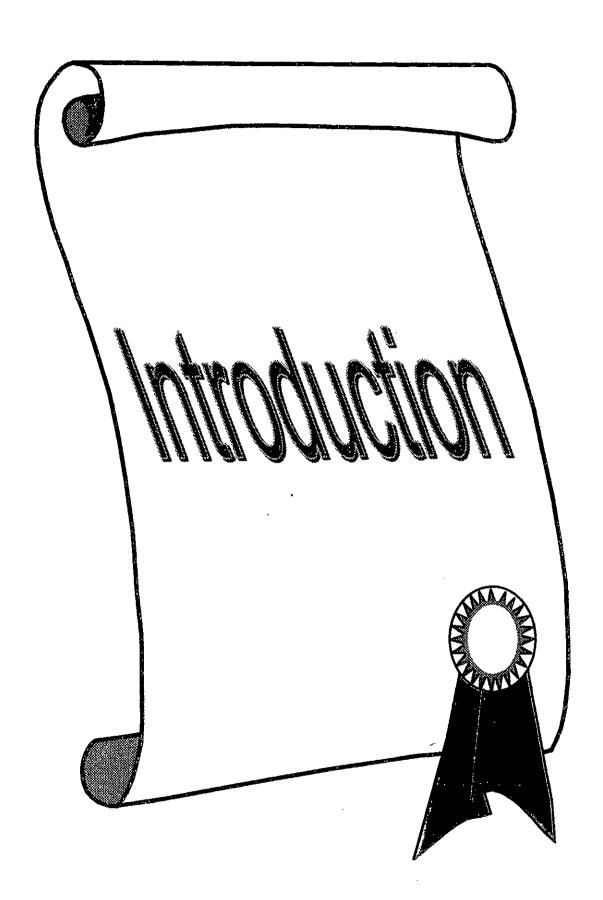
TG : Tri-glyceride

TGF-B : Transforming growth factor B.

UAE : Urinary albumin excretion.

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### INTRODUCTION

Diabetes mellitus is a syndrome characterized by chronic hyperglycemia and disturbances of carbohydrate, fat and protein metabolism associated with absolute or relative deficiencies in insulin secretion and/or insulin action. When fully expressed, diabetes is characterized by fasting hyperglycemia, but the disease can also be recognized during less overt stages and before fasting hyperglycemia appears, most usually by the presence of glucose intolerance. Diabetes mellitus may be suspected or recognized clinically by the presence of characteristic symptoms such as excessive thirst, polyuria, pruritus, otherwise unexplained weight loss, or one or more of the many complications associated with or attributable to the disease<sup>(1)</sup>.

Microalbuminuria is defined as a urinary albumin excretion rate (UAER) of  $20\text{-}200\mu\text{g/min}$ . If this is found consistently, meaning that it is seen in two of three urine samples collected over night, the patient is defined as having incipient diabetic nephropathy, which suggests an increased risk of progression. The higher and more consistent the excretion rate, the higher the risk for progression. Some invistigators use a slightly higher value, namely UAER of  $30\text{-}200\,\mu\text{g/min}$ , and other invistigators, when using overnight excretion, use  $15\mu\text{g/min}$  as the lower limit (2).

Diabetic nephropathy is the most frequent cause of endstage renal disease $^{(3,4)}$ . The incidence of ESRD secondary to NIDDM is projected to increase substantially  $^{(5)}$ .

Clinical factors associated with urinary albumin excretion in NIDDM  $\,$  are less well known $^{(6)}$ .

The aim of the present study is to assess the clinical factors associeted with urinary albumin excretion in NIDDM patients. 100 patients with NIDDM will be enrolled in this study.

# Review Of Literature