

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار





بعض الوثائق الأصلية تالفة





بالرسالة صفحات
لم ترد بالأصل



B1 Jo VN

**MEASUREMENT OF THROMBOMODULIN IN PATIENTS
WITH DIABETIC NEPHROPATHY AS A MARKER OF
GLOMERULO-ENDOTHELIAL INJURY**

Thesis

*Submitted to Faculty of Medicine,
University of Alexandria
In partial fulfillment of the requirement
Of the degree of*

Master Clinical Pathology

By

Abir Labib Elsaid Elkott

MBBCh (Alex.)

Department of Clinical Pathology

Faculty of Medicine

University of Alexandria

2000

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

ACKNOWLEDGEMENT

*First of all I thank **God** for helping me to accomplish this research and for providing me with such very encouraging and supportive supervisors*

*I wish to express my deepest gratitude to **Prof. Dr. Aida Saleh Omar**, Professor of Clinical Pathology, Faculty of Medicine, Alexandria University for her valuable advice, supervising this study and for continuous encouragement and guidance throughout the whole work.*

*I would like to express my deep appreciation to **Prof. Dr. Yehia Moustafa Ghanem**, Professor of Clinical Medicine & Diabetologia, Faculty of Medicine, Alexandria University for his support, valuable advice, and endless cooperation and effort.*

*My sincere gratitude and great appreciation to **Dr. Wessam El-Gendy**, Lecturer of Clinical Pathology, Faculty of Medicine, Alexandria University for her guidance and continuous support.*

CONTENT

Page

List Of Abbreviation

I. Introduction

1

II. Aim Of The Work

33

III. Material

34

IV. Methods

35

V. Results

41

VI. Discussion

50

VII. Summary And Conclusion

57

VIII. References

60

Protocol

Arabic Summary

ABBREVIATIONS

D.M.	Diabetes Mellitus
NIDDM	Non-Insulin dependent diabetes mellitus
AGEs	Advanced glycation end products
GFR	Glomerular filtration rate
UAE	Urinary albumin excretion
HbA _{1c}	Glycated haemoglobin
TM	Thrombomodulin
S-TM	Serum thrombomodulin
U-TM	Urinary thrombomodulin
vWF	VonWillebrand Factor
PAF	Platelet activating factor
TFPI	Tissue factor pathway inhibitor
EGF	Endothelial Growth Factor
LDL-cholesterol	Low density liporproteins
HDL-cholesterol	High density liporotiens
TG	Triglycerides
NDR	No diabetic retinopathy
SDR	Simple diabetic retinopathy
PDR	Proliferative diabetic retinopathy
DAG	Diacylglycerol
EDRF	Endothelial-derived relaxing factor
PMN	Polymorphonuclear

INTRODUCTION

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 secretions 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 complications associated with or attributable to the disease⁽¹⁾.

Etiologic classification of diabetes mellitus^(2,3):

I) **Type 1 diabetes** (β -cell destruction, usually leading to absolute insulin deficiency).

A-Immune mediated.

B-Idiopathic.

II) **Type 2 diabetes** (may range from predominantly insulin resistance with relative insulin deficiency to a predominantly secretory defect with insulin resistance).

III) Other specific type:

A- Genetic defects of β -cell function:

1. Chromosome 12, HNF-1 α (Hepatic necrosing factor- one alpha) (formerly MODY 3).
2. Chromosome 7, glucokinase (formerly MODY 2).
3. Chromosome 20, HNF-4 α (Hepatic necrosing factor - four alpha)
4. Mitochondrial DNA.
5. Others.

B-Genetic defects in insulin action:

1. Type A insulin resistance.
2. Lipoatrophic diabetes.
3. Rabson-Mendenhall syndrome.
4. Others.

C-Diseases of the exocrine pancreas:

1. Pancreatitis.
2. Trauma/pancreatectomy.
3. Neoplasia.
4. Cysticfibrosis.
5. Hemochromatosis.
6. Fibrocalculous pancreatopathy.
7. Others.

D-Endocrinopathies:

1. Acromegaly.
2. Cushing's syndrome.

3. Glucagonoma.

4. Pheochromocytoma.

5. Somatostatinoma.

6. Hyperthyroidism.

7. Aldosteronoma.

8. Others.

E- Drug-or chemical-induced:

1. Nicotinic acid.

2. Psychoactive agents: -phenytion.

3. Glucocorticoids.

4. Thyroid hormone.

5. Diazoxide.

6. adrenergic agonists.

7. Thiazides.

8. α -interferon.

9. Others.

F- Infections:

1. Congenital rubella.

2. Cytomegalovirus.

3. Others.

G- Uncommon forms of immune-mediated diabetes:

1. Anti-insulin receptor antibodies.

2. Others.

H-Other genetic syndromes sometimes associated with diabetes:

1. Down syndrome.
2. Klinefelter syndrome.
3. Turner syndrome.
4. Friedreich's ataxia.
5. Huntingtons chorea.
6. Prophyria.
7. Others.

IV) Gestational diabetes mellitus (GDM).

Diagnosis of diabetes mellitus

A) diagnostic criteria for diabetes mellitus^(2,3):

1. The diagnosis is usually straightforward when diabetes presents with classical symptoms, and a casual plasma glucose measurement that is (≥ 200 mg/dl, 11.1 mmol/L).
2. Fasting plasma glucose equal or excess (126mg/dl, 7.0 mmol/L) on at least two occasions. Fasting is defined as no caloric intake for at least 8hr.
3. Two hours after glucose load (postprandial plasma glucose equals or exceeds 200mg/dl (11.1 mmol/L) on at least two occasions. The test should be performed as described by WHO,