سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

سامية محمد مصطفى

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

سامية محمد مصطفى

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

سامية محمد مصطفى

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة

سامية محمد مصطفى

شبكة المعلومات الجامعية

بالرسالة صفحات لم ترد بالأصل

STUDY OF PLASMA AMYLIN CONCENTRATION IN HEALTHY INDIVIDUALS AND PATIENTS WITH INSULIN DEPENDENT DIABETES MELLITUS

Thesis
Submitted for Partial Fulfillment of M. Sc.
Degree in Clinical Pathology

By
Mona Abdel Sattar Haggag Yousef
M. B. B. Ch

Under Supervision of

PROF. Dr. Laila Mahmoud Montaser
Professor and Head of Department of Clinical Pathology
Faculty of Medicine - Menoufiya University

Prof. Dr. Ekhlas Hussein El-Shiekh
Professor of Clinical Pathology
Faculty of Medicine - Tanta University

Dr. Amira Abdel Kader El-Hendy
Lecturer of Clinical Pathology
Faculty of Medicine - Menoufiya University

Faculty of Medicine
Menoufiya University
2000

STUDY OF PLASMA AMYLIN CONCENTRATION IN HEALTHY INDIVIDUALS AND PATIENTS WITH INSULIN DEPENDENT DIABETES MELLITUS

Thesis

Submitted for Partial Fulfillment of M. Sc.
Degree in Clinical Pathology

By

Mona Abdel Sattar Haggag Yousef

M. B. B. Ch

Discussed by

Prof. Dr. Laila Mahmoud Montaser

Professor and Head of Department of Clinical Pathology

Faculty of Medicine - Menoufiya University

Prof. Dr. Mamdouh Youssef Refaat

Professor and Head of Pediatric Department

Faculty of Medicine - Menoufiya University

Prof. Dr. Aisha Abdel Latif El-Sayed Ahmed

Professor of Clinical Pathology

Faculty of Medicine - Tanta University

Faculty of Medicine
Menoufiya University
2000

S. A. Salem

ACKNOWLEDGMENT

First and foremost, thanks to God.

I would like to express my sincere appreciation and gratitude to **PROF. Dr. LAILA MONTASER** Professor and head of Department of Clinical Pathology, Faculty of Medicine. Menoufiya University for her kind Supervision, great patience, generous advice and honest guidance for this work.

Also, I would like to express my sincerest gratitude and deepest appreciation to **Dr. EKHLAS EL-SHIEKH** Professor of Clinical Pathology Faculty of Medicine, Tanta University for her generous Supervision, tremendous effort and kind advice during the conduction of this work.

I'm particularly indebted to **Dr. AMIRA El-HENDY** Lecturer of Clinical Pathology, Faculty of Medicine Menoufiya University for her honest assistance helpful advice, cooperation support and encouragement through the preparation of this work.

CONTENTS

LIST OF TABLES

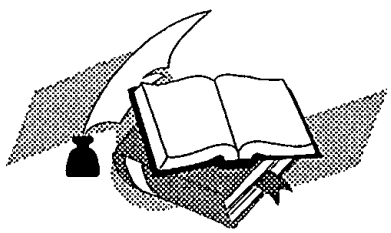
LIST OF FIGURES

ABBREVIATIONS

1, 5- AG	1, 5 Anhydro - D- glucitol
2, 3-DPG	2, 3- Diphosphoglycerate
APS	Acetate plate sealer
cAMP	Cyclic adenosine monophosphate
CGRP	Calcitonin gene related peptide
CHO	Carbohydrate
DKA	diabetic keto-acidosis
DM	Diabetes mellitus
FBG	fasting blood glucose
FBS	fasting blood sugar
G-6-P	glucose -6- phosphate
GDM	gestational diabetes mellitus
GFR	glomerular filtration rate
GIT	Gastro intestinal tract
GLP-1	Glucagon - like peptide 1.
HGO	Hepatic glucose output
HLA	Human leucocyte antigen
HPLC	High performance liquid chromatography

IAPP	Islet amyloid polypeptide
IDDM	Insulin dependent diabetes mellitus
IGT	Impaired glucose tolerance
IVGTT	Intravenous glucose tolerance test
NDDG	National Diabetes Data group
NIDDM	Non-insulin dependent dialetes mellitus
OGTT	Oral glucose tolerance test
PAS	Periodic acid schiff
SA. HRP	Streptavidin - horse radish peroxidase.

INTRODUCTION



INTRODUCTION

Islet amyloid polypeptide (IAPP) or amylin is a 37-amino acid peptide with a sequence homology to calcitonin gene-related peptide (CGRP) and is stored together with insulin in the β-cell secretory granules of the human pancreatic islets (***Lukinius et al., 1989***).

Amylin or islet amyloid polypeptide (IAPP) is a neuroendocrine peptide and is a major constituent of islet amyloid deposits in pancreas of diabetic human (***Clark et al., 1990***). Amylin and CGRP are considered to be novel physiological regulators of fuel metabolism (***Cooper, 1994***).

Amylin has been proposed to play a role in insulin-dependent diabetes mellitus (IDDM) (***Rink et al., 1993***). In IDDM, it can modulate a number of metabolic processes also regulated by insulin. Amylin lack plays a significant role to promote the tendency to hypoglycemia and defective glycemic control characteristic of insulin - treated patients with autoimmune diabetes. So, treatment of such diabetics with injections of amylin as well as insulin is being evaluated with the aim of lessening the incidence and severity of hypoglycemia and improving glycemic control (***Cooper, 1991***).

It is the predominant component of amyloid deposits in pancreatic islets in > 90% of patients with type 2 (NIDDM).

Amylin has been proposed as the mediation of insulin resistance, an important component early in the development of NIDDM. ***(Percy et al., 1996).***