



شبكة المعلومات الجامعية





شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم

بعض الوثائق الأصلية تالفة

THE STUDY OF TRIGLYCERIDE AND C-REACTIVE PROTEIN LEVELS IN SUBCLINICAL ATHEROSCLEROSIS IN TYPE 2 DIABETES MELLITUS

Thesis

*Submitted in Partial Fulfillment of M.Sc.
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿ قَالُوا سُبْحَنَكَ

ص لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا

إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ ﴾

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

سورة البقرة الآية "٣٢"

DEDICATION TO MY MOTHER

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LIST OF ABBREVIATIONS

ACE	: Angiotensin converting enzyme
ADA	: American diabetes association
AGE	: Advanced glycation end products
AHCPR	: Agency for health care policy and research
APO-A1	: Apolipoprotein A1
APO-A2	: Apolipoprotein A2
APO-E	: Apolipoprotein E
AT-1	: Angiotensin Type-1
BMI	: Body mass index
CAD	: Coronary artery disease
CCA	: Common carotid artery
CHD	: Coronary heart disease
CRP	: C-reactive protein
CT	: Computed tomography
DCCT	: Diabetes control and complication trial.
DNA	: Deoxy ribo-nucleic acid
ECG	: Electrocardiogram
ECM	: Extra-cellular matrix
ESRD	: End stage renal disease
FPG	: Fasting plasma glucose
G6PD	: Glucose 6 phosphate dehydrogenase
GT	: Guanine thiamine
HB-EGF	: Heparine binding epidermal growth factor
HDL-C	: High density lipoprotein- cholesterol
HMG-CoA	: 3-hydroxy-3-methyl glutaryl coenzyme A
HNF-1 α	: Hepatocyte nuclear factory-1 α .
HRT	: Hormonal replacement therapy
ICAM-1	: Intercellular adhesion molecule-1
IDDM	: Insulin dependent diabetes mellitus
IGF-1	: Insulin like growth factor
IgG	: Immunoglobulin G
IGT	: Impaired glucose tolerance
IL-6	: Interleukin-6
IMT	: Intimal medial thickness
IRAS	: Insulin resistance atherosclerosis study
IRS	: Insulin resistance syndrome
LDL	: Low density lipoprotein
LPL	: Lipoprotein lipase
MCP-1	: Monocyte chemotactic protein-1
MODY	: Maturity onset diabetes of the young

MRA : Magnetic resonance angiography
mRNA : Messenger ribonucleic acid
NDDG : National diabetes data group
NIDDM : Non-insulin dependent diabetes mellitus
NPDR : Non-proliferative diabetic retinopathy.
OGTT : Oral glucose tolerance test
PAI-1 : Plasminogen activator inhibitor-1
PPAR- γ : Peroxisome Proliferator Activated Receptor-Gamma.
PDGF : Platelet derived growth factor
PDR : Proliferative diabetic retinopathy
2hr PPG : 2 hours post prandial plasma glucose
PVD : Peripheral vascular disease
SAP : Serum amyloid P
SHEP : Systolic hypertension in the elderly program
SMCs : Smooth muscle cells.
TC : Total cholesterol
TG : Triglycerides
TGF- β : Transforming growth factor β
TNF- α : Tumour necrosis factor alpha.
TPA : Tissue plasminogen activator
UKPDS : United Kingdom prospective diabetes study.
VCAM-1 : Vascular cell adhesion molecule-1
VEGF : Vascular endothelial growth factor
VLDL : Very low density lipoprotein
W/H : Waist to hip ration
WBCs : White blood cells
WESDR : Wisconsin epidemiologic study of diabetic retinopathy
WHO : World health organization

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INTRODUCTION

INTRODUCTION

The conventional risk factors for atherosclerosis include elevated LDL-C, low HDL-C, high triglycerides, hypertension, diabetes, smoking, age and post-menopausal state. Novel serum markers, including C-reactive protein (CRP) and homocysteine, have the ability to gauge risk in individual patients. A number of non-invasive imaging modalities have the potential to measure and to monitor atherosclerosis in asymptomatic individuals and include exercise ECG testing, electron beam CT, MRA, positron emission tomography and high resolution ultrasound to measure carotid intimal-medial thickness (*Pearson and Thomas, 2002*).

Inflammation plays a key role in the pathogenesis of atherosclerosis. CRP has been found to predict cardiac events in healthy subjects and in patients with coronary atherosclerosis. Elevated CRP is an independent predictor of carotid plaques. Body mass index, HDL-C, triglycerides, diabetes and hypertension are significant determinants of CRP (*Blackburn, 2001*).

Teno et al. (2000) stated that hypertriglyceridemia may be an independent risk factor for early atherosclerosis in type 2 diabetes.

Pradhan et al. (2001) reported that elevated levels of CRP and IL-6 predict the development of type 2 diabetes mellitus and this supports the possible role of inflammation in diabetogenesis.