

Homocysteine Blood Level and Depression In Patients With Ischaemic Heart Disease

Thesis

*Submitted In Partial fulfillment of the Requirements of the MSc. Degree
In Psychiatry & Neurology*

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2012

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(نَرْفَعُ دَرَجَاتٍ مَّنْ نَّشَاءُ وَفَوْقَ كُلِّ ذِي عِلْمٍ عَلِيمٌ)

سورة يوسف (الآية 76)

Acknowledgement

I would like to express my deep and sincere gratitude to my supervisor, **Professor Emad Hamdi Ghoz**, for his detailed review, constructive criticism and excellent advice during the preparation of this thesis.

I wish to express my warm and sincere thanks to **Dr. Shereen Abdel Mawla** *lecturer of psychiatry*, for her constructive comments, and for her important support throughout this work.

I owe my most sincere gratitude to **Dr. Amaal Abdou** *lecturer of clinical and chemical pathology*. Her extensive discussions around my work and interesting explorations have been very helpful for this study.

My thanks and profound appreciation to **Dr. Hoda Abdou** *lecturer of psychiatry*, who helped a lot in almost every stage in this work.

I wish to express my thanks and profound appreciation to **Professor Mohammed Abdel Ghani** who gave me the opportunity to work in the Department of Cardiology, Cairo University and gave me untiring help during my difficult moments.

I wish to thank all members and colleagues of the department of psychiatry. They were kind support and helpful.

I owe my loving thanks to my parents and brothers. Without their encouragement and understanding it would have been impossible for me to finish this work.

Muhammad Nashaat

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List of Abbreviations

A A: Amino Acid

ABPI: Arterial Health Brachial Pressure Index

ACC: American College of Cardiology

ACEIs: Angiotensin-Converting-Enzyme Inhibitors

ACS: Acute Coronary Syndrome

ACTH: Adreno Cortico Trophic Hormone

AD: Anxiety Disorders

AdoMet: Adenosyl-Methionine

AdoHcy: S-Adenosyl-Homocysteine

ADP: Adenosine Diphosphate

AHA: American Heart Association

AIDs: Acquired Immune Deficiency Syndrome

AMI: Acute Myocardial Infarction

ANS: Autonomic Nervous System

APA: American Psychiatric Association

BB: Beta-Blockers

BP: Blood Pressure

BD: Bipolar Disorder

BDI: Beck Depression Inventory

BNP: Brain Natriuretic Peptide

CABG: Coronary Artery Bypass Graft

CAC: Coronary Artery Calcium

CAD: Coronary Artery Disease

CBS: Cystathionine B-Synthase

CBT: Cognitive Behavioral Therapy

CCS: Canadian Cardiovascular Society

CCU: Coronary Care Unit

CHD: Coronary Heart Disease

CNS: Central Nervous System

CK: Creatinine Kinase

CRF: Corticotropine Releasing Factor

CT: Computed Tomography

CVD: Cardiovascular Vascular Diseases

DSM IV: Diagnostic & Statistical Manual of Mental Disorder (4th) Edition

DSMIII: Diagnostic & Statistical Manual of Mental Disorder (3rd) Edition

EBCT: Electron-Beam Computed Tomography

ECG: Electrocardiography

EECP: Enhanced External Counterpulsation

EF: Endothelial Functions

ENRICHD: Enhancing Recovery In Coronary Heart Disease Patients

EU: European Union

FFA: Free fatty acids

GABA: Gamma Aminobutyric Acid

GAD: Generalized Anxiety Disorder

HHcy: Hyperhomocysteinemia

HIV: Human Immune Deficiency Virus

Hcy: Homocysteine

HPA: Hypothalamic Pituitary Adrenal

HR : Heart Rate

HRV: Heart Rate Variability

5-HT: 5- Hydroxy Tryptamine

HTN: Hypertension

ICD10: International Classification of Diseases (10th) Edition

ICU: Intensive Care Unit

IHD: Ischaemic Heart Disease

IL-1: Interleukin -1

IMT: Intima Media Thickness

LMWHs: Low Molecular Weight Heparins

lnVLF: Natural Log of Very Low Frequency

LV: Left Ventricle

MAO: Monoamine Oxidase

MDCT: Multi-Detector Computed Tomography

MDD: Major Depressive Disorder

MDE: Major Depressive Episode

MeS: Metabolic Syndrome

MI: Myocardial Infarction

MP: Methylation Potential

MTFR: Methyl Tetrahydrofolate Reductase

NAC: N-Acetyl-Cysteine

NE: Norepinephrine

NMDA: N-Methyl-D-Aspartate

NT-pro-BNP: N-Terminal pro-BNP

NSTEMI: Non–ST-Segment Elevation Myocardial Infarction

PD: Panic Disorders

PCI: Percutaneous Coronary Intervention

PNS: Parasympathetic Nervous System

PSE 10: Present State Examination 10th Edition

PSSS: Perceived Social Support Scale

PTCA: Percutaneous Transluminal Coronary Angioplasty

PTSD: Post Traumatic Stress Disorders

PWV: Pulse Wave Velocity

OCD: Obsessive Compulsive Disorder

RAAS: Renin-Angiotensin-Aldosterone System

RNA: Ribonucleic Acid

SAM: S-Adenosylmethionine

SNS: Sympathetic Nervous System (SNS)

SPECT: Single Photon Emission Tomography

SSRI: Selective Serotonin Reuptake Inhibitors

STEMI: ST-Segment Elevation Myocardial Infarction

TCAs: Tricyclic Antidepressants

TMG: Trimethylglycine

TNF: Tumor Necrosis Factor

TXA2: Thromboxane A2

UA: Unstable Angina

UK: United Kingdom

Introduction

&

Aim of the Work

Introduction

The search for the biological links between mental disorders and physical condition is the holy grail of psychiatric research. This is potentially more likely if the biological link is traced through an associated physical disorder. The relation between ischaemic heart disease and depression is one potential candidate for identifying the biological associations of depressive disorders in general.

There are several explanations for the frequent co-occurrence of depressive symptoms in patients with ischaemic heart disease. Depression has been linked to an excess of ischaemic cardiac events and ischaemic heart disease, a life threatening condition, may lead to depression. Regardless of the direction of causality, a potential underlying biological mechanism is intriguing to find. One of the most novel biological factors implicated in ischaemic heart disease, is hyperhomocysteinemia which is also assumed to play a role in depression.