

شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلو

بسم الله الرحمن الرحيم





MONA MAGHRABY



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلو



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



MONA MAGHRABY



شبكة المعلومات الجامعية التوثيق الإلكترونى 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



MONA MAGHRABY

SERUM VASPIN LEVEL AS A PROGNOSTIC MARKER IN EGYPTIAN HYPERTENSIVE PATIENTS

Thesis
Submitted for the partial fulfillment of Master degree in
Internal Medicine

By

Moamen Ahmed Mahmoud M.B.B.CH

Supervised by

Prof. / Essam Abd El Wahed Hasan

Professor of Internal Medicine - Hematology department Faculty of Medicine - Ain Shams University

Prof. / Nermeen Tayseer Aly

Professor of Clinical Pathology Faculty of Medicine – Ain Shams University

Prof. / Hanaa Fathey Abd El Samiea

Assist. Professor of Internal medicine - Hematology Department Faculty of Medicine - Ain Shams University

Faculty of Medicine Ain Shams University 2018

بِشِهُ لِسَالًا لِحِجْزَ لِآجُجُنِيْ

وقُلِ اعْمَلُوا فَسنيرَى اللهُ عَمَلَكُمْ وقُلِ اعْمَلُوا فَسنيرَى اللهُ عَمَلَكُمْ ورَسُولُهُ والْمُؤْمِنُونَ

صدق الله العظيم

سورة التوبة آية (١٠٥)



Acknowledgement

First of all, all gratitude is due to Allah almighty for blessing this work, until it has reached its end, as a part of his generous help, throughout my life.

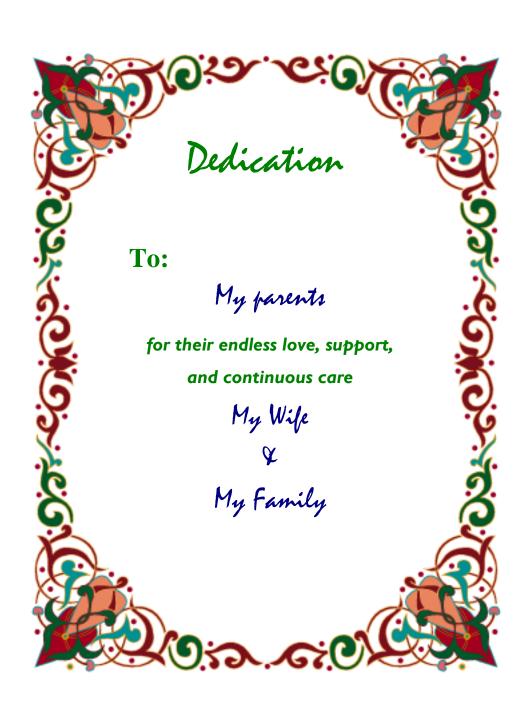
Really I can hardly find the words to express my gratitude to **Dr/ Essam Abd El Wahed Hasan**, Professor of Hematology department, Faculty of Medicine – Ain Shams University, for his supervision, continuous help, encouragement throughout this work and tremendous effort he has done in the meticulous revision of the whole work. It is a great honor to work under his guidance and supervision.

I would like also to express my sincere appreciation and gratitude to **Dr/ Nermeen Tayseer Aly**, Professor of Clinical Pathology, Faculty of Medicine – Ain Shams University, for her continuous directions and support throughout the whole work.

I cannot forget the great help of **Dr/Hanaa Fathey Abd El**Samiea, Assist. Professor of Hematology Department, Faculty of
Medicine – Ain Shams University for her invaluable efforts, tireless
guidance and for her patience and support to get this work into
light.

Also we owe a debt of gratitude to all who contributed in this work and helped with all the love and dedication to quality and accuracy in performance and constructive engagement and encourage for achievement in order to progress.

Moamen A.M.



List of Contents

| | Page |
|-----------------------|--------|
| Acknowledgment | |
| List of Abbreviations | ii |
| List of Figures | |
| List of Tables | |
| Introduction | 1 |
| Aim of work | 4 |
| Review of Literature | 6 |
| •H | yperte |
| nsion | 6 |
| •A | dipose |
| tissue | 47 |
| Patients and methods | 67 |
| Results | 70 |
| Discussion | 79 |
| Summary | 83 |
| Recommendations | 84 |
| References | 85 |
| Arabic Summary | |

List of Abbreviations

ACE : Angiotensin Converting Enzyme

ADH : Antidiuretic hormone

BHS : British Hypertension Society

BMI : Body mass indexBP : Blood pressure

CAD : Coronary artery diseaseCBC : Complete blood count

CD : Crhon s disease

CoA : Coarctation of the aorta

COX-1 : Cyclooxygenase-1

EPHESUS : Eplerenone Post-Acute Myocardial Infarction

Heart Failure Efficacy and Survival Study

ERT : Estrogen replacement therapy

ESRD : End-Stage Renal Disease

HRT : Hormone replacement therapy

ITT : Insulin tolerance test

mRNA : Messenger Ribonucleic acid

NAFLD: Non-alcoholic fatty liver disease

NSAIDs: Nonsteroidal anti-inflammatory drugs

RALES: Randomized Aldactone Evaluation Study

SBP : Systolic blood pressure

SHR : Spontaneously hypertensive ratsTGF-B : Transforming Growth Factor Beta

TIAs : Transient Ischemic Attacks

TZD : ThiazolidinedioneUC : Ulcerative Colitis

VSMC : Vascular smooth muscle cell

HTN: Hypertension

ESC : European society of cardiology LVH : Left ventricular hypertrophy

LV : Left ventricle

CKD : Chronic kidney diseaseCHF : Chronic heart failure

IBD : Inflammatory bowel disease

ELIZA: Enzyme linked immunosorbent assay

JNC : Joint national committeeATP : Adenosine triphosphate

HARVEST: Hypertension and ambulatory recording

venetia study.

List of Figures

| Fig. | Title | Page |
|------|--|------|
| 1 | Classification of risk among hypertensive | 28 |
| | patients | |
| 2 | White Adipose | 47 |
| 3 | Skin section | 48 |
| 4 | White fat cell and brown fat cell | 51 |
| 5 | Representation of "pear" or lower body fat | 51 |
| | distribution and "apple" or upper body fat | |
| | distribution. | |
| 6 | vaspin level in the three groups excluding the | 72 |
| | extremities results in each group | |
| 7 | Scatter diagram for the relation between age | 74 |
| | and vaspin in the whole sample | |
| 8 | Age related vaspin level in control group. | 74 |
| 9 | Age related serum vaspin level among | 75 |
| | hypertensive patient group | |
| 10 | Age related vaspin level among hypertensive | 75 |
| | complicated group. | |
| 11 | Vaspin level among females. | 76 |
| 12 | Vaspin level among males | 77 |
| 13 | Serum vaspin levels in studied groups | 77 |

List of Tables

| Table | Title | Page |
|-------|--|------|
| 1 | Classification of Hypertension. | 13 |
| 2 | ESC classification of hypertension. | 14 |
| 3 | Definitions of hypertension by office and out- | 26 |
| | of-office blood pressure levels. | |
| 4 | Results analysis. | 71 |
| 5 | Comparison of vaspin level in the 3 studied | 72 |
| | groups. | |
| 6 | Age related vaspin level among the whole | 73 |
| | sample. | |
| 7 | Correlation between age and vaspin in the | 73 |
| | whole sample. | |

Introduction

Hypertension is one of the most common worldwide diseases afflicting humans and is a major risk factor for stroke, myocardial infarction, vascular disease, and chronic kidney disease. Hypertension may be primary, which may develop as a result of environmental or genetic causes, or secondary, which has multiple etiologies, including renal, vascular, and endocrine causes. (Meena Madhur, 2014)

Obesity is associated with an increase in intravascular volume, elevated cardiac output, activation of the renin-angiotensin system and, probably, increased sympathetic outflow so it is a major factor of hypertension development on the other hand, Weight reduction lowers blood pressure. Metabolic syndrome is associated with both the development of hypertension and an increased risk of adverse cardiovascular outcomes. (Micheal Sutters, 2013)

Until age 45 years, a higher percentage of men than women have hypertension, from age 45 years onward, the percentages are nearly equal between men and women. (Meena Madhur, 2014)

Elevated blood pressure results in structural and functional changes in the vasculature and heart. targetorgan damage varies markedly between individuals with similar levels of office hypertension, ambulatory pressures are superior to office readings in the prediction of endorgan damage. (Micheal Sutters, 2013)