

DETECTION OF ENDOTHELIAL DYSFUNCTION IN NON RHEUMATIC ADULT AF PATIENTS

*Thesis
Submitted For Partial Fulfillment
of Master Degree In Cardiology*

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2010

**تقييم الكفاءة الوظيفية للخلايا المبطنة لجدران الأوعية الدموية في
المرضى الذين يعانون من ذبذبة أذينية غير منتظمة**

رسالة مقدمة

توطئة للحصول على درجة الماجستير في أمراض القلب
مقدمة من

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2010

ACKNOWLEDGEMENT

First and foremost, Thanks to GOD

I would like to express my deepest gratitude and sincere thanks to **Prof. Dr. Wagdy Abd El-Hameed Galal**, professor of Cardiology, Faculty of Medicine, Ain-Shams University, for his instructive supervision, continuous guidance and valuable instructions.

I am greatly indebted to **Asst Prof. Dr. Hayam Mohammed El-Damanhoury**, Asst Professor of Cardiology, Faculty of medicine, Ain-Shams University, for her expert guidance, valuable suggestions and excellent supervision.

I will never be able to express my deepest feelings and profound gratitude to **Dr. Ayman Mortada Abd-Elmoteleb**, Lecturer of Cardiology, Faculty of Medicine, Ain Shams University, for suggesting and planning the design of this work.

I owe much to the whole staff members in electrophysiology and radiology departments in National Heart Institute for their support, advice, and cooperation.

Finally, I would like to address my family especially my parents and my wife and thank them for their unlimited support and care.

To my parents and my wife who restore the rhythm of my life and to my baby who maintains it.

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LIST OF ABBRRVIATIONS

ACE	Angiotensin converting enzyme
AF	Atrial fibrillation
ARBs	Angiotensin receptor blockers
AV	Atrioventricular
BAD	Brachial Artery Diameter
Bpm	Beat per minute
BUN	Blood urea nitrogen
CAD	Coronary artery disease
CBC	Complete Blood Count
CCU	Cardiac Care Unit
CHADS ₂	Risk stratification scheme for high-risk patients with AF who should be targeted for anticoagulation
CHF	Congestive heart failure
CXR	Chest x-ray
DC	Direct current
DCC	Direct current cardioversion
ECG	Electrocardiogram
ED	Endothelial dysfunction
EDCF	Endothelium Derived Contracting Factor
EDHF	Endothelium Derived Hypopolarizing Factor
EDRF	Endothelium Derived Relaxing Factor

eNOS	endothelial Nitric Oxide Synthase
FMD	Flow Mediated Dilation
HCM	Hypertrophic Cardiomyopathy
HF	Heart Failure
HRV	Heart Rate Viability
ICAM	Intercellular adhesion molecule-1
INR	International Normalization Ratio
IV	Intra venous
LA	Left atrium
LAA	Left atrial appendage
LDL	Low-density lipoprotein
LVH	Left ventricular hypertrophy
MI	Myocardial infarction
NICE	National Institute for Health and Clinical Excellence in UK
NO	Nitric oxide
PAF	Paroxysmal atrial fibrillation
PAI-1	Plasminogen activator inhibitor-1
PET	Positron Emission Tomography
PVs	Pulmonary veins
RA	Right atrium
SEC	Spontaneous echo contrast
SPB	Systolic blood pressure
TEE	Transesophageal echocardiography

TIA	Transient ischemic attack
tPA	Tissue plasminogen activator
TTE	Transthoracic echocardiography
UK	United Kingdom
VCAM	Vascular cell adhesion molecule-1
vWF	von Willebrand factor
WPW	Wolff-Parkinson White syndrome

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INTRODUCTION

Atrial Fibrillation is a supraventricular tachyarrhythmia characterized by uncoordinated atrial activation with consequent deterioration of mechanical function. On the ECG, rapid oscillations, or fibrillatory waves that vary in amplitude, shape and timing, replace consistent P waves, and there is an irregular ventricular response that is rapid when conduction is intact (***Bellet S et al., 1971***).

Atrial fibrillation (AF) is the most common arrhythmia in clinical practice. It is often rapid, irregular, and might arise from multiple ectopic atrial foci. Twenty percent of patients with paroxysmal atrial fibrillation (PAF), defined as lasting less than 7 days (and spontaneous conversion), progress to chronic (persistent or permanent) AF, defined as lasting more than 30 days (***Page et al., 2004***).

The prevalence of AF increases dramatically with age and is seen in as high as 9% of individuals by the age of 80 years. In high-risk patients, the thromboembolic stroke risk can be as high as 9% per year and is associated with a 2-fold increase in mortality (***Falk et al., 2001***).