DETECTION OF ENDOTHELIAL DYSFUNCTION IN NON RHEUMATIC ADULT AF PATIENTS

Thesis
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By

Ragab Mohammed Abdel-hafez Allam
M.B.B.Ch

Under Supervision of

Prof. Dr. Wagdy Abd El-Hameed Galal
Professor of Cardiology
Faculty of Medicine, Ain Shams University

Asst Prof. Dr. Hayam Mohammed El-Damanhoury
Asst Professor of Cardiology
Faculty of Medicine, Ain Shams University

Dr. Ayman Mortada Abd-Elmoteleb
Lecturer of Cardiology
Faculty of Medicine, Ain Shams University

Faculty of Medicine
Ain Shams University
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تحت إشراف

الأستاذ الدكتور/ وجدى عبدالحميد جلال
أستاذ أمراض القلب
كلية الطب - جامعة عين شمس

الأستاذة الدكتورة/ هيام محمد الدمنهورى
أستاذ مساعد أمراض القلب
كلية الطب - جامعة عين شمس

الدكتور/ أيمن مرتضى عبدالمطلب
مدرس أمراض القلب
كلية الطب - جامعة عين شمس

كلية الطب
جامعة عين شمس
2010

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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).***