

بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأفلام قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من 15-25 مئوية ورطوبة نسبية من 20-40% To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

EVALUATION OF TARGET ORGAN LESIONS IN PATIENTS WITH WHITE COAT HYPERTENSION

Thesis
Submitted For The Partial Fulfillment of
M.Sc. Cardiology

By
ABD EL RAHMAN AHMED SAMRA
(M.B.B.ch.)

Supervisors

PROF. DR.

AHMED M. ABD EL- MONEIM

Professor and Head of Cardiology Benha Faculty of Medicine

PROF. DR.

METWALLY EL - EMARY

Assistant Professor of Cardiology Benha Faculty of Medicine

PROF. DR.

HAMZA M. KABIL

Assistant Professor of Cardiology Benha Faculty of Medicine

BENHA FACULTY OF MEDICINE BENHA UNIVERSITY

2005





فَأَمَّا الزَّبَدُ فَيَذْهَبُ جُفَاءً وَأَمَّا مَا يَنْفَعُ النَّاسَ فَيَمْكُثُ فِي الأَرْضِ كَذَلِكَ يَضرْبِ اللَّهُ الأَمْثَالَ فَيَمْكُثُ فِي الأَرْضِ كَذَلِكَ يَضرْبِ اللَّهُ الأَمْثَالَ

صَدَقَ اللهُ الْعَظِيمُ

سُوكرة الرّعكر آية (١٧)

Acknowledgement

Before all and above all, thanks to GOD, to whom I relate every success in my life.

I'm really grateful to *Prof. Dr. Ahmed M. Abd EL-Moneim*, Professor and Chairman of Cardiology Department, Benha Faculty of Medicine, for his unlimited effort, advices *and* assistance, without his kind assistance and scientific directions, this work would not have been in this form.

I'm greatly indebted to *Prof .Dr. Metwally El- Emary*, Assistant Prof. of Cardiology, Benha Faculty of Medicine, for his continuous encouragement and sincere supervision that have been, of great help in performing this work in the present manner.

Words are not enough to express my profound thanks and obligation to *Prof. Dr. Hamza Kabil*, Assistant Prof. of Cardiology, Benha Faculty of Medicine, for his valuable advices and unlimited effort, kind help and assistance to perform this work in the present manner.

Finally, I would like to express my thanks to any member supported me through this work.

List of Abbreviations

ABPM	:	Ambulatory Blood Pressure Monitoring
ACE	:	Angotensin Converting Enzyme
ADA	:	American Diabetes Association
AF	:	Atrial Fibrillation
Anti. HBP Rx	:	Anti High Blood Pressure Medication
BMI :	:	Body Mass Index
BE	:	Blood Pressure
BPM 12 1	:	Blood Pressure Measurement
BSA**	:	Body Surface Area
C.Pneumoniae	:	Chlamydia Pneumonia
C.V.Stroke	:	Cerebro Vascular Stroke
CAD	:	Coronary Artery Disease
CCD	:	Clinical Cardiovascular Disease
GFR A	:	Coronary Flow Reserve
CHF	:	Congestive Heart Failure
DBP	:	Diastolic Blood Pressure
DM Recussives	. :	Diabetes Mellitus
ECGRA	:	Electro Cardiogram
EDD	:	Endothelium Dependent Vasodilatation
EDD	:	End Diastolic Dimension
EDV	:	End Diastolic Volume
EF.	:	Ejection Fraction
ESCH **	:	European Society of Cardiology
ESD	:	End Systolic Dimension
ESH.	:	European Society of Hypertension
ESRD =	:	End Stage Renal Disease
TO THE PARTY OF THE PARTY OF THE PARTY.		

ESV	**	End Systolic Volume
H	:	Hour
НВР	:	Home Blood Pressure
HDL	:	High Density Lipoprotein
HF	:	Heart Failure
HP - A A	:	Hewlett Packard
HR	:	Heart Rate
IMI	:	Intima Media Thickness
IOH 3	:	Isolated Office Hypertension
ISH	:	International Society of Hypertension
IVSd	:	Inter ventricular Septal Wall Thickness in
		Diastole
IVSs	:	Inter ventricular Septal Wall Thickness in
		Systole
LVHE DE BY	:	Left Ventricular Hypertrophy
DVIDda 16	:	Left Ventricular Internal Dimensions in
		Diastole
LVIDS	:	Left Ventricular Internal Dimensions in
		Systole
LVM	:	Left Ventricular Mass
LVMI	:	Left Ventricular Mass Index
MISHA	:	Myocardial Infarction
NHP	:	National Hypertension Project
No	:	Numbur
PVD	:	Peripheral Vascular Disease
PWTd 12	:	Posterior Wall Thickness in Diastole
PWTst	:	Posterior Wall Thickness in Systole
REP 1995	:	Risk Factor
REFERENCE	:	Risk Factor

SBP	:	Systolic Blood Pressure
SCI	:	Silent Cerebral Infarct
SD	:	Standard Deviation
SH	:	Sustained Hypertension
SWT	:	Septal Wall Thickness
Syst-Eur	•	Systolic Hypertension in Europe
TIA	•	Transient Ischemic Attack
TOD	:	Target Organ Damage
UAE	:	Urinary Albumin Excretion
WCE	:	White Coat Effect
WCH:	:	White Coat Hypertension
WHO	:	World Heath Organization
Y. Single	:	Year

.



Content	Page
Introduction and aim of the work	1
Review of Literature	
Chapter(1): Hypertension and target organ lesions	4
Chapter(2): Methods of Blood Pressure Measurement.	
- Self Monitoring of Blood Pressure at Home.	27
- Ambulatory Blood Pressure Monitoring.	30
Chapter (3): White Coat - Hypertension.	36
Patients and Methods	63
Results	75
Discussion	108
Summary and conclusion	122
Limitations and Recommendations	124
References	125



1-Tables of the review of literature	Page
Table (1): Classification of hypertension.	4
Table(2): Target organ damage and associated	5
atherosclerotic disease	
Table(3): Role of clinical manifestations of	10
coronary heart disease by hypertensive status 40	
years follow - up in the framingham study	
Table(4): Myocardial infarctions unrecognized by	11
hypertensive status	
Table(5): Advantages and limitations of use of	33
ABPM	
Table (6): Diagnostics threshold for ABPM	34
Table (7): Sensitivity, specificity, positive and	28
negative predictive value of home BP	
II-Tables of the results	Page
Table (1): Base line clinical characteristics of the	77
risk factors of hypertension among the studied	•
groups of patients	
Table(2):Comparison between the studied groups	81
of patients regarding blood pressure	İ
measurements (mmHg) and heart rate (beat /min)	
Table(3): Comparison between the studied	82
groups regarding E. C.G. findings	

Table(4): Echocardiography findings among the	85
studied groups of patients	
Table(5): Comparison between the studied	87
groups regarding laboratory findings	
Table (6): Distribution of the studied groups of	89
patients regarding the complications of	
hypertension	

•

.

List of Figures

Figures of the review part :	Page
Figure(1): Severe retinopathy (cotton wool spots,	
hemorrhages and spared retinal arteries) in acute severe	
hypertension	
Figure(2): cotton wool spots, retinal hemorrhages and	25
constricted retinal arteries in severe prolonged	
systemic hypertension	
Figure(3): Bilateral optic disc swelling in accelerated	25
hypertension	23
Figures of Patients and methods Parit:	TELESCOPE SECTION OF THE PROPERTY OF THE PROPE
	Page
Figure(1): Schiller PR-102 Blood Pressure Recorder	67
"Main elements of the unit "	
Figure(2): Schiller PR - 102 Blood Pressure Recorder	68
"Keys"	
Figures of the results Rarte:	Page \$
Figure(1): Age distribution among the studied groups	90
Figure(2): Sex distribution among the studied groups	91
Figure(3):Systolic blood pressure at different	92
occasions among the studied groups	
Figure(4): Diastolic blood pressure at different	93
occasions among the studied groups	
Figure(5): Heart rate at different occasions among the	94
studied groups	

	1
Figure(6): Comparison between the studied groups	95
regarding the presence of L.V.H. in E.C.G	
Figure(7): Comparison between the studied groups	96
regarding L.V.M.I	
Figure(8): Comparison between the studied groups	97
regarding microalbuminuria (mg /24 hr)	
Figure(9): L.V.M.I. of patients No. 2 in W.C.H. group	98
" Echo - Doppler view"	·
Figure(10): Standard surface 12-leads resting	98
electrocardiogram for patient No. 2 of W.C.H. group	
Figure(11): 24-h Average ambulatory blood pressure	99
monitoring for patient No. 2 of W.C.H. group	
Figure(12): L.V.M.I. of patient No. I in S.H. group "	103
Echo Doppler view"	
Figure(13): Standard surface 12- lead resting	103
electrocardiograms for patient No.1 of S.H. group	•
Figure(14): 24-h Average ambulatory blood pressure	104
monitoring for patient No.1 of S.H. group	
momenting for patient No.1 of S.H. group	

Introduction Aim and work of the