

شبكة المعلومات الجامعية







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 على هذه الأفلام قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار في درجة حرارة من ١٥-٥٠ مئوية ورطوبة نسبية من ٢٠-٠٠% To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%



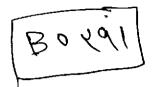
بعض الوثائـــق الإصليــة تالفــة



بالرسالة صفحات لم ترد بالإصل

ROLE OF ANTIOXIDANTS IN MYOCARDIAL

ISCHEMIA



Thesis

Submitted By



(M.B.B.Ch.)

In Partial Fulfillment for the master Degree of

Physiology

SUPERVISORS

Dr. Alaa El-Tallees

Assistant Prof. of Physiology Benha Faculty of Medicine

Dr. Ahmed Ibrahim Agamy

Assistant Prof. of Physiology Benha Faculty of Medicine

Dr. Nasr Arafaat Belasy

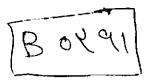
Assistnat Prof. of Physiology Benha Faculty of Medicine

Dr. Ashraf El-Desoky Belal

Lecturer of Physiology Benha Faculty of Medicine

BENHA FACULTY OF MEDICINE ZAGAZIG UNIVERSITY

ROLE OF ANTIOXIDANTS IN MYOCARDIAL



ISCHEMIA

Thesis

Submitted By

Naglaa Yehia Ali Ibrahim Nafeh

(M.B.B.Ch.)

In Partial Fulfillment for the master Degree of

Physiology

SUPERVISORS

Dr. Alaa El-Tallees

Assistant Prof. of Physiology Benha Faculty of Medicine

Dr. Ahmed Ibrahim Agamy

Assistant Prof. of Physiology Benha Faculty of Medicine

Dr. Nasr Arafaat Belasy

Assistnat Prof. of Physiology Benha Faculty of Medicine

Dr. Ashraf El-Desoky Belal

Lecturer of Physiology
Benha Faculty of Medicine

BENHA FACULTY OF MEDICINE ZAGAZIG UNIVERSITY



ACHONIDORNAN



ACKNOWLEDGEMENT

First thank GOD who have me able to accomplish this work.

I would like to express my unlimited appreciation to *Dr. Mohamed S. El-Hamady*, Prof. of Physiology, Benha Faculty of Medicine for his fatherly guidance and marvelous support. It was a great honor for me to work under his kind supervision.

My deepest appreciation and thanks to *Dr. Alaa El-Tallees*, Assistant Prof. of Physiology, Benha Faculty of Medicine for his assistance and endless help during the delivery of this work.

I would like to express my deep sense of gratitude and heartfelt thanks to *Dr. Ahmed Agamy*, assistant Prof. of Physiology, Benha Faculty of Medicine, for his guidance and continous advice throughout the prepration and writing of this thesis.

I wish to express my profound thanks to *Dr. Nasr Arafaat*, Assistant Prof. of Physiology, Benha Faculty of Medicine for his useful comment and continous support.

My grateful thanks are extended to *Dr. Ashraf Belal*, Lecturer of Physiology, Benha Faculty of Medicine for his advice and support.

My thanks are extended to all who helped me to complete this work.

LIST OF CONTENTS

	Page
INTRODUCTION	1
REFIEW OF LITERATURE	
Pathophysiology of ischemic heart disease	2-8
β - Adrenrgic receptors	9-10
Oxygen free radicals	11-20
Cellular antioxidant defense mechanisms	21-30
MATERIALS AND METHODS	31
RESULTS	39
DISCUSSION	87
SUMMARY	
REFERENCES	
ARABIC SUMMARY	

LIST OF TABLE

Table(1):	T-wave voltage in rats injected isoprenalin	50
Table(2):	T-wave area in rats injected isoprenalin	51
Table (3):	Percentage of infarction size in rats injected isoprenalin.	52
Table(4):	C.K. level in U/L befor and after injection of isoprenalin	53
Table (5):	T-wave voltage, area, infarction size and C.K. in rats	54
()	injected isoprenalin	
Table (6):	Effect of vit E at a dose 5mg/kg/day for one month on T-	57
•	wave voltage induced by isoprenalin injection	
Table(7):	Effect of Vit E at a dose 5mg/kg/day for one month on T-	58
	wave area induced by isoprenalin injection	
Table(8):	Effect of vit. E at a dose 5mg/kg/day for one month on	59
	infarction size.	
Table(9):	Effect of vit E at a dose 5mg/kg for one month on T-wave	60
	voltage, area and infarction size induced by isoprenalin	
	injection	
Table(10):	Effect of vit E at a dose 20mg/kg for one month on T-	63
	wave voltage induce by isopernalin injection.	
Table(11):	Effect of vit E at a dose 20mg/kg/day for one month on	64
	T-wave area induced by isoprenalin injection	٠.
Table(12):	Effect of vit E at a dose 20mg/kg/day from one month on	65
	infarction size.	
Table(13):	Effect of vit E at a dose 20mg/kgm/day for one mont on	66
	T-wave voltage, area and infarction size induced by	
	isoprenalin injection	۲۵
Table(14):	Effect of vit C at a dose of 0.5mg/kg/day for one month	69
	T-wave voltage induced by isopronalin injection	70
Table(15):	Effect of vit C at a dose 0.5 mg/kg/day for one month on	70
	T-wave area induced by isoprenalin injection.	71
Table(16):	Effect of vit C at a dose 0.5 mg/kg/day for one month on	71
	infarction size.	77
Table(17):	Effect of vit C at a dose 0.5 mg/kg/day for one month on	72
	T-wave voltage, area and infarction size induced by	
	isoprenalin injection.	
Table (18):	Effect of vit C at a dose 2mg/kg/day for one month on T-	75
	wave voltage induced by isoprenalin injection	
	wave voltage induced by isoptenant injection	

Table(19):	Effect of vit C at a dose 2mg/kg/day for one month onT-	76
	wave area induced by isoprenalin injection	
Table (20):	Effect of vit C at adose 2mg/kg/day for one month on infarction size.	77
Table(21):	Effect of vit C at a dose 2mg/kg/day for one month on	78
	T-wave voltage, area and infarction size induced by isoprenalin injection	
Table(22):	Effect of vit E at different doses (5mg, 20mg/kgm) on the onset of change in T-wave voltage and area	81
Table(23):	Effect of vit C at different doses (0.5 mg, 2mg/kgm) on the onset of change in T-wave voltage and area	82
Table(24):	Comparison of the effect of the two doses of vit E (5mg/20 mg/kg) on T-wave voltage, area and infarction size	83
Table (25):		84
Table(26):		85
Table (27):	Comparison of the effects of large doses of vit E (20mg) and (2mg) on T-wave voltage, area and infarction size	86

LIST OF FIGURES

Fig (1A):	Lead II of E.C.G changes in rats injected by isopronalin	55
	only	
Fig.(2A):	Lead II of E.C.G. changes in rats injected by isoprenalin +vit E at adose 5mg/kg/day	61
Fig.(3A):	Lead II of E.C.G. changes in rats injected isoprenalin +vit E at adose 20mg/kgm/day.	67
Fig.(4A):	Lead II of E.C. G. changes in rats injected isoprenalin +vit C at a dose 05 mg/kgm/day.	73
Fig.(5A):	Lead II of E.C.G. changes in rats injected isoprenalin + vit C at adose 2mg/kg/day	79
Fig.(1B):	T-wave voltage, area and infarction size in rats injected isoprenalin.	56
Fig.(2B) :	Effect of vit E a dose 5mg/kgm/day for one month on T-wave voltage, area and infarction size induced by isoprenalin injection	62
Fig.(3B):	Effect of vit E at a dose of 20mg/kg/day for one month on T-wave voltage, area and infarction size induced by isoprenalin injection.	68
Fig.(4B):	Effect of vit C at a dose of 0.5 mg/kgm/day for one month on T-wave voltage, area and infarction size, induced by isoprenalin injection.	74
Fig.(5B):	Effect of vit C at adose of 2mg/kg/day for one month on	80
	T-wave voltage, area and infarction size induced by isopronalin injection	

ABRREVIATIONS

ADP = Adenosine diphosphate

AMP = Adenosine monophosphate

AMI = Acute myocardial infarction

CPK= Creatine phasphokinase

E.C.G = Electrocardiogram

HOCI = Hypochlarous acid

IHD = Ischemic heart disease

GSH = Glutathione

LDH = Lactic dehydrogenase

mm² Square millimeters

MV = Millivotts

NAADP = Nicotinamide adenosine diphosphate

NO = nitric oxide

PMN = polymorphonuclear lucocyte

OFR_s= Oxygen free radicals

SOD = Superoxide dismutase

SR = Sarcoplasmic reticulum

TTC = Tirphenyl tetrazolium chloride

VIT= Vitamine



INTRODUCTION AND AIM OF THE WORK

