شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

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

بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالأصل

HISTOLOGICAL STUDY ON THE EFFECT OF AMIODARONE (CORDARON) ON THE LUNG AND THE LIVER OF ALBINO RAT

Thesis
Submitted For partial Fulfillment of M.D.
Degree in Basic Sciences (Histology)
Presented By

Safaa Mohammed Shaker Mohammed
(M.B.,B.Ch, MS.c.)
Assistant lecturer of Histology
Faculty of Medicine - Ain Shams University

Supervised By

Prof. Dr. Salwa Mohammed Abd El-Tawab
Professor of Histology
Faculty of Medicine, Ain Shams University

Prof. Dr. Hoda Foad Nada
Professor of Histology
Faculty of Medicine, Ain Shams University

Prof. Dr. Kawther Abd El-Raheem Fattah
Professor of Histology
Faculty of Medicine, Ain Shams University

Faculty of Medicine
Ain Shams University
2002

CONTENTS

ACKNOWLEDGMENT

I would like to thank ***Professor Dr. Salwa Mohamed Abd El Tawab***, Professor of Histology, Faculty of medicine, Ain Shams University, for her consistent supervision, continuous encouragement, skillful scientific guidance and valuable advices.

I am particularly very grateful and appreciative to the keen supervision, great patience and endless help of ***Professor Dr. Hoda Foad Nada***, Professor of Histology, Faculty of medicine, Ain Shams University.

I find no words by which I can express my extreme thanks and greatest respect to ***Professor Dr. Kawther Abd El-Raheem Farrag***, Professor of Histology, Faculty of Medicine, Ain Shams University, who devoted much of her time, attention and advice.

I am also grateful to ***Professor Dr. Olfat Sayed Ahmed***, Professor of Histology, Faculty of Medicine, Ain Shams University, and ***Professor Dr. Magda Mohamed Zaki El Maghraby***, Professor and head of Histology Department, Faculty of Medicine, Ain Shams University for their encouragement.

I am thankful to all members and colleagues in the department for their sympathetic cooperation, especially Dr. Manal Hasan for her help in doing the measurements using the image analyzer.

Finally, I would like to extend my thanks to my husband and parents for their patience, support and love.

INTRODUCTION

Cardiac arrhythmias are complex and fatal conditions that necessitate the use of anti-arrhythmic drugs for saving patient's life *(Laurence and Bennett, 1992).*

Amiodarone is a widely used anti-arrhythmic drug. Although it is usually used in different types of cardiac arrhythmias, many side effects such as thyroid dysfunction and skin discoloration are reported. The most serious side effects are lung damage and impairment of liver function *(Gillian and Harry, 1997).*

Chendrasckhar et al., (1996) stated that patients using amiodarone might develop pulmonary toxicity with an estimated fatality ranging from 1% up to 33%.

Poucell et al., (1984) reported cases of disturbed liver function and liver enlargement in patients treated with amiodarone. Moreover, *Padmavathy et al., (1992)* mentioned that administration of amiodarone might lead to liver damage with increased activity of liver enzymes, alanine aminotransferase and aspartate aminotransferase.

On the other hand, *Daniels et al., (1990)* did not observe any sign of pulmonary damage or hepatotoxicity after administration of the drug. Moreover, *Wilson et al., (1991)*

studied the effect of amiodarone on the lung and found no histological changes.

There has been increasing interest in the possibility that the toxic products of oxidative reactions may play a role in tissue damage caused by amiodarone. It has been suggested by *Bennett et al., (1987)* that the keto oxygen of amiodarone is a focus for free radical formation.

Mechanisms of damage caused by amiodarone including generation of free radicals were studied by *Reasor and Kacew (1996)*. They assumed that antioxidants might have a protective role against amiodarone toxicity.

On the other hand, *Wilson and Lippmann (1993)* suggested an immune mediated mechanism for damage caused by amiodarone. The controversy of results concerning the effect of amiodarone on liver and lung, suggested the need for more studies about the drug effect on these organs.

AIM OF THE WORK

The aim of this study is to elucidate the effect of amiodarone on the liver and lung and the protective role of α-tocopherol as a natural antioxidant with drug administration.