

١٠

Submitted for Partial Fulfillment of
Master degree in
Pediatrics

618.92991
T. I

1947/1/25

Presented by

52910

Dr. Taher Ismail Osman
M.B., B.Ch., Faculty of Medicine
Ain Shams University

ne

Under Supervision of

Assis. Prof. Dr.Khaled Salah Awwad

Assistant Professor of Pediatrics
Faculty of Medicine - Ain Shams University

1962

Assis. Prof.Dr.Nashwa Ahmed Adel El-Badawi

Assistant Professor of Clinical Pathology
Faculty of Medicine - Ain Shams University

Dr. Nancy Ahmed Kashef

Lecturer of Pediatrics
Faculty of Medicine - Ain Shams University

7

**Faculty of Medicine
Ain Shams University
1995**





بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَحَمْدًا لِمَا أَتَى نَكْرَةً تَعْلَمُ
وَكَانَ فَضْلُ اللَّهِ جَلِيلًا وَغَنِيمًا

.. صدق الله العظيم ..

ACKNOWLEDGMENT

First, thanks to God.

I wish to express my sincere gratitude and heartfelt thanks to **Dr.Khaled Awwad**, Assistant Professor of Pediatrics, Faculty of Medicine, Ain Shams University, for giving me the privilege of working under his supervision. His constant encouragement, close supervision and constructive guidance were the paramount axes in the selection, initiation and progress of this work.

I would like to express hearty thanks to **Dr.Nashwa El-Badawi**, Assistant Professor of Clinical Pathology, Faculty of Medicine, Ain Shams University, for her remarkable effort, considerable help and continuous guidance, which were the major factors behind the completion of this work. My deep gratitude goes to her active skilful participation and great cooperation throughout the practical part of this work.

I feel deeply indebted to **Dr.Nancy Kashaf**, Lecturer of Pediatrics, Faculty of Medicine, Ain Shams University, for her faithful encouragement, valuable guidance, kind help and close supervision. I am most grateful to her and words will never be enough to express my appreciation of her effort.

My thanks and appreciation go to all doctors of the Pediatric Cardiology, General Cardiology and Cardio-Surgery Departments, Faculty of Medicine, Ain Shams University.

I heartily thanks all the members of my family for their understanding and tolerant support throughout this work.

Last, but by no means least,I thank the children and their parents for their cooperation and patience, and to whom I dedicate this work.

Taher Ismail

CONTENTS

	Page
Introduction and Aim of the work	1
Review of literature	
Chapter I: RHEUMATIC FEVER	2
Prevalence in developing countries	2
Etiology and pathogenesis	2
Pathology.....	7
Manifestations	9
Treatment of acute rheumatic fever	15
Chapter II: SERUM LIPIDS, LIPOPROTEINS AND APOLIPOPROTEINS	18
Lipids.....	18
Lipoproteins and their classes	19
Apolipoproteins.....	25
Lipoprotein metabolism	32
Plasma lipid and lipoprotein levels in rheumatic fever	36
Chapter III: LIPOPROTEIN (a).....	38
Structure of Lp(a)	38
Structure of apolipoprotein (a)	40
Genetics of Apo (a)	40
Regulatory events in Lp (a) synthesis and degradation	40
Pathogenicity of Lp (a)	42
Factors affecting lipoprotein (a)	45
Subjects and Methods.....	49
Results.....	73
Discussion.....	116
Recommendations.....	127
Summary and conclusion	128
References.....	130
Arabic summary	

List of Tables

	Page
Table (1) : Summary of lipoprotein properties.....	22
Table (2) : Major classes of human plasma lipoproteins- apolipoprotein composition.....	31
Table (3) : Clinical data of group I.....	54
Table (4) : Clinical data of group II.....	55
Table (5) : Clinical data of group III.....	56
Table (6) : Laboratory investigations including (ESR, ASOT, CRP), X -ray and ECG of group I.....	74
Table (7) : X-ray and ECG of group II.....	76
Table (8) : X-ray and ECG of group III.....	78
Table (9) : Serum lipid profile of group I.....	80
Table (10): Group I Apo A-I, Apo B and Lp (a).....	82
Table (11): Serum lipid profile of group II.....	84
Table (12): Group II Apo A-I,Apo B and Lp(a).....	86
Table (13): Serum lipid profile of group III.....	88
Table (14): Group III Apo A-I,Apo B and Lp(a).....	90
Table (15): Serum lipid profile of group IV (control).....	92
Table (16): Group IV (control) Ap A-I, Apo B and Lp(a)...	94
Table (17): Statistical comparison between group I and group IV (control) using "t" test as regards serum lipid profile.....	96
Table (18): Statistical comparison between group II and group IV (control) using "t" test as regards serum lipid profile.....	98
Table (19): Statistical comparison between group III and group IV (control) using "t" test as regards serum lipid profile.....	100
Table (20): Statistical comparison between group I and group II using "t" test as regards serum lipid profile.....	102
Table (21): Statistical comparison between group I and group III using "t" test as regards serum lipid profile.....	104
Table (22): Statistical comparison between group II and group III using "t" test as regards serum lipid profile.....	106

List of Figures

	Page
Fig. (1): General structure of a lipoprotein particle.....	21
Fig. (2): Lipid transport by plasma lipoproteins.....	35
Fig. (3): Schematic representation of the structure of Lp (a).....	39
Fig. (4): Comparative study between the 3 groups of patients and the control group regarding total cholesterol.....	109
Fig. (5):Comparative study between the 3 groups of patients and the control group regarding HDL-cholesterol.....	110
Fig. (6):Comparative study between the 3 groups of patients and the control group regarding LDL- cholesterol.....	111
Fig. (7):Comparative study between the 3 groups of patients and the control group regarding triglycerides.....	112
Fig. (8):Comparative study between the 3 groups of patients and the control group regarding Apo A-I.....	113
Fig. (9):Comparative study between the 3 groups of patients and the control group regarding Apo B.....	114
Fig. (10):Comparative study between the 3 groups of patients and the control group regarding Lp(a).....	115

INTRODUCTION & AIM OF THE WORK

