

ESTIMATION OF IgE AND TOTAL
EOSINOPHILIC COUNT IN RESPONSE TO
TREATMENT OF BRONCHIAL ASTHMA IN CHILDREN

T H E S I S

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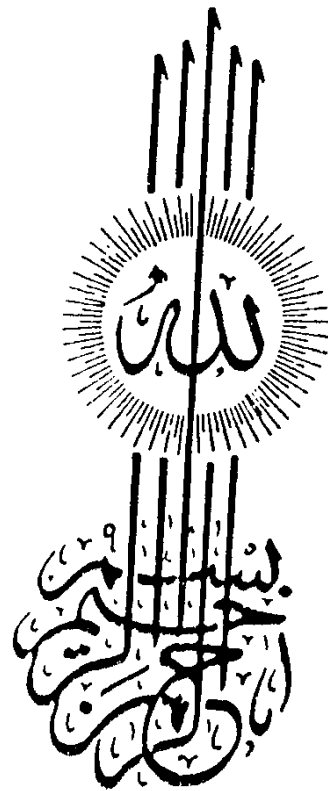
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To My Parents & My Fiancée

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LIST OF ABBREVIATIONS

ATP	:	Adenosine Tri-phosphate.
BK-A	:	Basophil Kallikrein of Anaphylaxis.
CAMP	:	Cyclic Adenosine Mono-phosphate.
DNA	:	Deoxy-ribo-nucleic acid.
ECF-A	:	Eosinophil Chemotactic Factor of Anaphylaxis.
EDF	:	Eosinophil Differentiation Factor.
ELISA	:	Enzyme Linked Immunosorbent assay.
EOS. %	:	Eosinophil Percent.
FEV ₁	:	Forced Expiratory Volume.
FVC	:	Forced Vital Capacity.
G. mean:		Geometric mean.
GM-CSF	:	Granulocyte/macrophages-Colony Stimulating Factor.
IgA	:	Immunoglobulin A.
IgD	:	Immunoglobulin D.
IgE	:	Immunoglobulin E.
IgG	:	Immunoglobulin G.
IgM	:	Immunoglobulin M.
Iu/ml	:	International unite per milliliter.
MBP	:	Major Basic Protein.
U1	:	Microliter.
mg	:	Milligram.
mm	:	Millimeter.
MMER	:	Maximum mid expiratory flow rate.
NCF	:	Neutrophil Chemotactic Factor.

ng : Nanogram.
No : Number.
PAF : Platelet Activating Factor.
PEFR : Peak Expiratory Flow Rate.
SD : Standard Deviation.
SRS-A : Slow Reacting Substance of Anaphylaxis.
T.E.C. : Total Eosinophilic Count.
T.L.C. : Total Leukocytic Count.
VC : Vital Capacity.

TABLE OF CONTENTS

PART I	<u>PAGE</u>
INTRODUCTION AND AIM OF THE WORK	1
PART II	
REVIEW OF LITERATURE	
- Bronchial asthma (Chapter I)	3
- Immuno globulin E (Chapter II)	34
- Eosinophils (Chapter III)	51
PART III	
SUBJECTS AND METHODS	66
PART IV	
RESULTS	76
PART V	
DISCUSSION	91
PART VI	
SUMMARY AND CONCLUSION	101
RECOMENDIATION	103
REFERENCES	104
ARABIC SUMMARY	

LIST OF FIGURES

	<u>PAGE</u>
Fig. (1) : Structure of IgE	35
Fig. (2) : Role of IgE in immediate hypersensitivity reactions	41
Fig. (3) : Total serum IgE before and after treatment	83
Fig. (4) : T.L.C. before and after treatment....	84
Fig. (5) : Eosinophil % of the control	85
Fig. (6) : Eosinophil % before and after treatment with corticosteroids	86
Fig. (7) : Eosinophil % before and after treatment with aminophylline.....	87
Fig. (8) : Eosinophil % before and after treatment with brianil	88
Fig. (9) : Eosinophil % before and after treatment	89
Fig. (10) : T.E.C. before and after treatment ...	90

LIST OF TABLES

	<u>PAGE</u>
Table (1) : Drug therapy of asthma	25,26
Table (2) : Normal level of serum IgE for age in healthy children	44
Table (3) : Comparison between age of the control and asthmatic patients	67
Table (4) : Sex distribution of asthmatic children compared with those of the control	67
Table (5) : Classification of the patients according to history of similar attack, family history and history of previous admission	68
Table (6) : Mean and S.D. of age in different groups of patients and their control	69
Table (7) : Mean and S.D. of age in asthmatic patients and their control	69
Table (8) : Comparison of the mean values of IgE, T.L.C., Eos. % and T.E.C. in asthmatic patients before treatment and thier control	76
Table (9) : Comparison of the mean values of IgE, T.L.C., Eos. % and T.E.C. in asthmatic patients after treatment and their control	77
Table (10): Comparison of the mean values of IgE, T.L.C., Eos. % and T.E.C. in male and female patients	78
Table (11): Effect of treatment with corticoste-roids on the level of serum IgE, T.L.C., Eos. % and T.E.C.	79
Table (12): Changes in serum IgE, T.L.C., Eos. % T.E.C., in response to treatment with bricanyl	80
Table (13): Effect of treatment with aminophy-lline on the level of serum IgE, T.L.C., Eos. % and T.E.C.....	81

PART I INTRODUCTION AND AIM OF WORK

INTRODUCTION

Bronchial asthma is defined as : A disease characterized by increased responsiveness of the air way to various stimuli, and manifested by slowing of forced expiration that change in severity either spontaneously or with treatment (ajoint committe of the American thoracic society and the American college of chest phsician).

Bronchial asthma is also defined as : A disease characterized by dyspnea due to widespreaded narrowing of the peripheral airways in the lung, and varying in severity over short period of time (Scadding, 1963).

The number of eosinophils in the peripheral blood of normal subjects expressed in absolute number ranges from 0.04 to 0.4×10^9 /L; average value of 0.1 to 0.2 to 0.2×10^9 are usual. However if it is expressed as percentage of the differential white cell count the number range from 1 to 6 precent. Eosinophilia is said to be present when the count exceeds 0.4×10^9 /L. The eosinophil count is subjected to diurnal physiological variation, due to the glucocorticoid fluctuation. Eosinophilia occurs in parasitic infestation, allergic

disorder e.g. Bronchial asthma, pulmonary disorders and malignant disorders (Penington et al., 1978).

IgE, is an immunoglobulin present in only trace amounts in serum. It has the ability to attach to human skin and to initiate aspect of the "allergic reaction". Like IgA, IgE is produced chiefly in the lining of the respiratory and intestinal tracts and is part of the external secretory system of antibody (Bernier, 1985).

In recent years, however, the bulk of antibodies responsible for immediate hypersensitivity in man has been shown to belong to the IgE class of immunoglobulin. In extrinsic asthma total serum IgE concentration is frequently elevated but is sometimes normal (Henson, 1985).

Aim of the work :

This study aims to evaluate the significance of eosinophilic count and total IgE measurement in children with bronchial asthma, in response to treatment and follow up of patients.

PART II
REVIEW
OF
LITERATURE

BRONCHIAL ASTHMA