PREDICTORS OF ASTHMA AND PERSISTENT WHEEZE IN EGYPTIAN ASTHMATIC CHILDREN

Thesis

Submitted for partial fullfilment

of Master Degree in Pediatrics

By

HANAA MOHAMED KAMAL MAHFOUZ

MB. BCH

Supervised by

Prof. Dr. KARIMA AHMED ABD EL KHALEK

Professor of pediatrics,

Ain Shams University.

AIN-SHAMS UNIVERSITY

1994

PREDICTORS OF ASTHMA AND PERSISTENT WHEEZE IN EGYPTIAN ASTHMATIC CHILDREN

Thesis

Submitted for partial fullfilment

of Master Degree in Pediatrics

By

HANAA MOHAMED KAMAL MAHFOUZ

MB. BCH

Supervised by

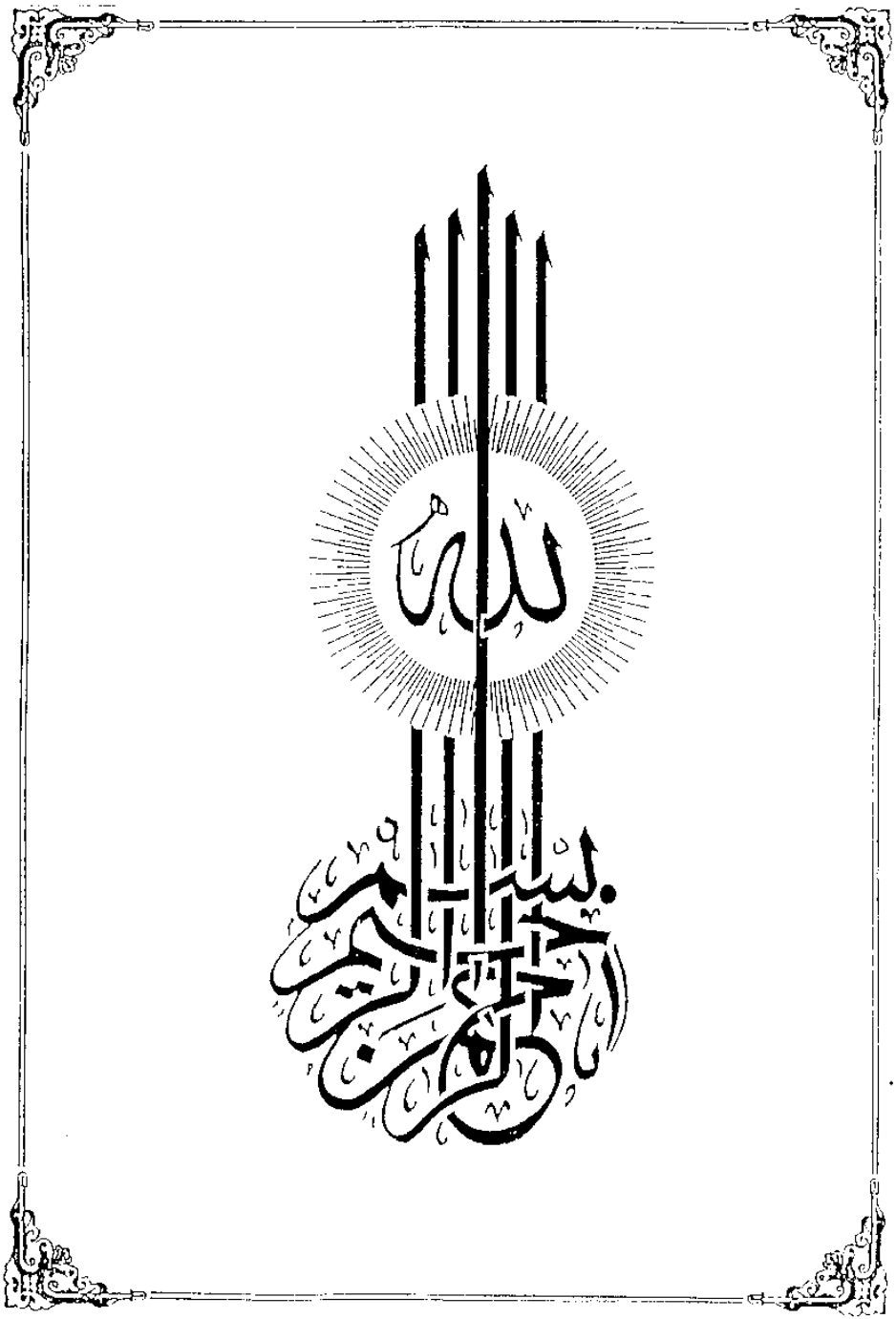
Prof. Dr. KARIMA AHMED ABD EL KHALEK

Professor of pediatrics,

Ain Shams University.

AIN-SHAMS UNIVERSITY

1994



Acknowledgement

I am greatly indepted to Professor Dr. ***Karima Abel Khalek*** *Professor of Pediatrics, Ain Shams University for giving me this precious opportunity of working under her supervision, her vast knowledge, wide experience and guidance added much to this work.*

I am also indebeted to Dr. ***Laila Hegazy*** *Lecturer of Pediatrics, Ain Shams University, I will always remember her kind help, meticulous supervision and constructive, criticism throughout this work.*

CONTENTS

List Of Tables

List Of Figures

Abreviations

C-AMP	Cyclic adenosine monophosphate
IgE	Immunoglobulin E.
LT D_4	Leukotrien D_4
PG	Prostaglandin.
RSV	Respiratory Syncytial virus.
VIP	Vasoactive intestinal peptide.

Introduction
&
Aim of work

INTRODUCTION

Bronchial asthma is responsible for a significant proportion of both acute and chronic illness in childhood (Bierman and Pearlman, 1990).

Asthma affects approximatly 5% to 10% of children and it is of growing concern because of an apparent increase in mortality and morbidity (Burney, 1992).

The risk factors associated with the development of asthma have been the focus of much investigations in the last 2 decades, stimuli produce much greater bronchial narrowing in asthmatic subjects than in healthy subjects. Among these stimuli is household air pollution by cigarette smoking. Parental smoking has been clearly associated with an increased risk of wheezing, respiratory symptoms, and lower respiratory tract illness in exposed infants (Wright et al. 1991).

Early damage to the lung secondary to viral infection in infancy and the toddler years may lead to an irreversible decrease in lung function and increased in the risk for chronic lung disease (Morgan and Martinez, 1992).

Allergens are among the important factors that provoke attacks of asthma, in most countries the commonest source of allergen appears to be

the house dust mite, since it is routinely collected by vacuuming, house dust represents a mixture of components, including microscopic insects (e.g. mites); animal (e.g. dog, cat), and human danders; mold; grass; weed, and tree pollens; insect parts and excrement (e.g. cockroach); and a variety of other seasonal and environmental products (Platts- Mills and De Weck, 1989).

Aim of the Work

The aim of work is to study in our Egyptian asthmatic children the most important risk factors affecting asthma and to be used as predictors for asthma in our Egyptian children. Among these predictors: Paternal smoking, house dust, air pollution by factories, respiratory infection, and home dampness.

Review Of Literature

Chapter I

Bronchial Asthma

Definition:

Asthma is a condition characterized by acute attacks of shortness of breath and wheezing associated with at least partially reversible airway obstruction. This airway obstruction is believed to be caused by allergic inflammation leading to mucosal infiltration and edema with mucus hypersecretion combined with either primary or secondary smooth muscle hypertrophy and bronchial hyperreactivity (Morgan and Martinez, 1992).

Asthma is a leading cause of morbidity in childhood. In the home envirnoment, asthma has a significant and wide ranging impact on the child and family. It has an adverse effect on the child's emotional life. The children feel restricted socially, and this poses a particular problem for the child and his parents (Hill et al, 1992).

Prevalence and Incidence of asthma:

Continued attempts to ascertain changes in prevalence of asthma overtime are impotrant because knowledge of changes in prevalence help

to define envirnomental factors important in the disease as well as responses to treatment. Prevalence may appear to be increased in the youngest age group because physicians are more readily diagnosing asthma in young children who wheeze with viral respiratory infections. Pediatricians are seeing an increased number of respiratory and gasterointestinal illness at earlier ages because of day care, along with increased socialization. Similar factors may produce an aparent increase in the number of cases with wheezing illness without a real increase in the disease prevalence (Hill et al., 1992).

In Egypt, the incidence of childhood asthma in outpatient clinic of Cairo University was 2.2% (El Hefny et al., 1980).

Also Awad et al. 1989 reported a prevalence rate of 3.01% in school children between 6-12 years., with a higher prevalence rate of asthma among males than females with a sex ratio of 1: 0.68.

In Egypt more recently El Sayed et al., 1991 reported the incidence is 8.2% among school children 3-14 years old, with a sex ratio of 1.4: 1 boys:girls.