

SINUSITIS IN CHILDREN WITH RESPIRATORY ALLERGY

Thesis

*Submitted for the partial fulfillment
of the Master degree in Pediatrics*

By

NERVANA ABD EL MAKSoud SALEH
M.B.B. Ch.

Supervised by

DR. SAWSAN SAYED EL MOSELHI

*Assistant Professor of Pediatrics
Faculty of Medicine, Ain Shams University*

DR. SHEREEN MEDHAT REDA

*Lecturer of Pediatrics
Faculty of Medicine, Ain Shams University*

DR. WAHID HUSSEIN

*Assistant Professor of Radiology
Faculty of Medicine, Ain Shams University*

**Faculty of Medicine
Ain Shams University
1998**





بسم الله الرحمن الرحيم

وَأَنْزَلَ اللَّهُ عَلَيْكَ الْكِتَابَ وَالْحِكْمَةَ وَعَلَّمَكَ مَا لَمْ تَكُنْ
تَعْلَمُ وَكَانَ فَضْلُ اللَّهِ عَلَيْكَ عَظِيمًا

صدق الله العظيم

(سورة النساء الآية ١١٣)

Acknowledgment

In The Name Of Allah

I'd like to thank everybody who has contributed to the attainment of my thesis and worked on making this work one to remember for the rest of my life.

Special thanks should be given to Dr. Sawsan Sayed El Moselhi. Assistant Professor of Pediatrics, Ain Shams University, I offer her a sincere thank for her contributions and for her unique efforts.

I am completely indebted to Dr. Wahid Hussein, Assistant Professor of Radiology, Ain Shams University, for his guidance and assistance and for his generous expenditure of time and effort on this thesis.

I would also like to record and acknowledge the devotion of Dr. Shereen Medhat Reda, lecturer of Pediatrics, Ain Shams University for devoting her untiring effort and committing herself to the success of my work.

I wish to express my sincere gratitude to the Pediatric Allergy and Immunology Clinic, Children Hospital and Radiology unit, Ain Shams University who worked where they were needed and were glad to help wherever and whenever.

Dedication

I dedicate this work to my parents who performed the exacting task of encouraging me all the time:

“Mam, Dad I remain captivated in a gratitude that dresses me in glory, you are my spring and my existence. I declare I shall love you all my life”.

Thanks every body!!!

List of contents

List of abbreviations

List of tables

List of figures

Introduction and aim of the work	1
Review of literature	2
Definitions of asthma	2
Provocating factors of asthma	4
Pathogenesis of asthma	14
Sinusitis	33
Subject and methods	43
Results	45
Discussion and conclusion	88
Recommendations	95
Summary	96
References	104
Arabic summary	

List of abbreviations

BA:	Bronchial asthma
Bil:	Bilateral
cGMP:	Cyclic guanosine monophosphate
CGRP:	Calcitonin gene related peptide
CT:	Computed tomography
FEV1:	Forced expiratory volume at first second
GM-CSF:	Granulocyte-macrophage colony stimulating factor
ICAM:	Intracellular adhesion molecule
IFN:	Interferon
Ig:	Immunoglobulin
LAR:	Late asthmatic response
LT:	Leukotriene
M.Catarrhalis:	Moraxella catarrhalis
Max. sinus:	Maxillary sinus
N.septum:	Nasal septum
N.turbinate:	Nasal turbinate

NANC:	Non adrenergic non cholinergic system
No:	Number
PAF:	Platelet activating factor
PG:	Prostaglandins
RSV:	Respiratory syncytial virus
Sig:	Significant
TH1:	T-helper 1
TH2:	T-helper 2
TNFα:	Tumor necrosis factor α
URIs:	Upper respiratory tract infections
VIP:	Vasoactive intestinal peptide

List of tables

Table No		Page
1	Mast cell derived mediators	18
2	Mechanisms of hyperreactivity	27
3	Symptoms suggestive of sinusitis among the studied asthmatic patients	47
4	Radiological findings of the studied patients	47
5	Incidence of sinusitis in asthmatic children as compared to the control	49
6	Incidence of sinusitis in X-ray sinus view according to the severity of bronchial asthma	49
7	Incidence of N.turbinate thickening in asthmatic children in comparison to control group	51
8	Incidence of nasal turbinates thickening in relation to sinusitis in asthmatic children	51
9	Comparison between septal deviation in diseased and control	53
10	Septal deviation among diseased cases in relation to sinusitis	53
11	Incidence of sinusitis with prolonged rhinorrhea	55
12	Incidence of sinusitis in patient with prolonged	55

	rhinorrhea in relation to fever	
13	The incidence of sinusitis in patient with allergic rhinitis	57
14	The eosinophils count in relation to the presence of sinusitis	57
15	Clinical symptoms as well as CT or X-ray among ten patient with symptoms suggestive of sinusitis	59
16	Shows the sensitivity and efficiency of X-ray in comparison to CT	61