Somnographic study of respiratory parameters in asthmatic children

Thesis

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The contents

List of abbreviations

A.C.T	Asthma control test
A.S.M	Airway smooth muscles
A.D	Atopic dermatitis
A.H.I	Apnea hypopnea index
B.D.P	Budesonide
B.M.I	Body mass index
C.P.A.P	Continuous positive airway pressure
C.T	Computed tomography
E. D.S	Excessive daytime sleepiness
E.E.G	Electroencephalogram
E.T.S	Enviromental tobacco smoke
F.E.V1	Forced expiratory volume in the first second
G.A.B.A	Gama amino butyric acid
G.C	Glucocorticods
G.E.R.D	Gastroesophageal reflux disease
G.I.N.A	Global Initiative for asthma
H.I	Hypopnea index
I.C.S	Inhaled corticosteroids
I.L	Interleukins
L.A.β.As	Long acting β antagonist
L.P.R	Laryngopharyngeal reflux
L.T.R.A	Leukotriene receptor antagonist
M.D.I	Metered dose inhaler
N.O	Nitrous oxide
N.R.E.M	Non–rapid eye movement
N.S.A.I.Ds	Non steroidal anti inflammatory drugs
O.D.I	Oxygen desaturation index
O.S.A	Obstructive sleep apnea

List of abbreviations

O.S.A.S	Obstructive sleep apnea syndrome
P.E.F.R	Peaked expiratory flow rate
P.P.Is	Proton pump-inhibitors
R.E.M	Rapid eye movement
S.D.B	Sleep-disordered breathing
S.H.S	Second hand tobacco smoke
S.L.I.T	Sublingual immunotherapy
S.W.S	Slow-wave sleep
SO2	Oxygen saturation
T.S.T	Total sleep time
V.L.P.O	Venterolatera preoptic nucleus l
V.C.A.M	Vascular cell adhesion molecule

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INTRODUCTION

Many asthmatic children get awake with symptoms of their disease almost every night. A growing body of evidence indicates that the causal pathway of cytokine changes resulting from asthma may influence the neurochemistry of sleep regulation. Equally possible is that sleep disturbance resulting from asthma promotes further changes in neuropeptides, which in turn influence the course of asthma (***Mastronarde et al., 2004)***.

Asthma, airway inflammation, and sleep are thus linked in a complex set of relationships in need for evaluation (***Hasler et al., 2004)***.

Aim of the work

The aim of this study is to assess the respiratory symptoms and parameters during sleep of asthmatic children.

Chapter (1)

Pediatric Bronchial Asthma

Definition:

Asthma is a chronic inflammatory disease of the lungs that affect a large proportion of population worldwide and can be fatal. Prevalence of asthma varies from country to country and is increasing, particularly in children ***(GINA, 2007).***

Despite the availability of highly effective treatments, for most asthmatic children, morbidity remains high and control of asthma is far from optimal ***(Grize et al., 2006).***

Pathology and pathophysiology of bronchial asthma:

To evaluate the airway pathology in bronchial asthma, bronchial biopsies were obtained from asthmatic children by bronchoscopy and compared with normal.

The pathology of bronchial asthma including multiple changes in the airway like shedding of the epithelial cells ,thickening of the basement membrane, mucous plugging, inflammatory cells infiltration, smooth muscle hypertrophy and hyperplasia ***(Tattersfield et al .,2002).***