Introduction

Asthma is a chronic disease characterized by airways inflammation hyper- responsiveness, often reversible obstruction and remodeling. Airway structural cells, recruited inflammatory cells and many mediators such as cytokines, chemokines and adhesion molecules are involved in the pathogenesis of asthma. Although asthma is controlable in most patients by currently available drugs, no treatment is preventive or curative. The disease has reached epidemic proportions worldwide and its incidence is continuing to increase. Many thousands have chronic severe asthma and suffer daily symptoms making it imperative that we continue to improve our understanding of the mechanisms of asthma particularly those related to airway inflammation and remodeling, the hallmarks of asthma, and to identify new therapeutic targets ***(Fang et al., 2008).***

Doull., (2004) stated that most of asthmatic children perceive growth failure due to pubertal delay but, the vast majority of them attain a normal adult height. He found that their growth followed a normal height centile until approximately 10 years of age then, half of them showed pubertal delay with decreased growth. Their heights returned to the baseline centile once puberty had commenced.

Adolescents who were mildly affected tend to become even taller and heavier than those without asthma. The severity of asthma influences final growth ***(Shohat et al., 1987).*** Regular systemic corticosteroids such as oral prednisolone result in a dose dependent impairment of growth ***(Kerrebijn et***

al., 1968). Also, Inhaled corticosteroids cause dose dependent growth suppression ***(Doull., 2004).***

BMI or Quetelet index is a statistical measure of the weight of a person scaled according to height. As such, it is useful as a population measure. ***(Eknoyan & Garabed., 2008).*** It is defined as the individual's body weight divided by the square of his/her height. The formulae universally used in medicine produce a unit of measure of kg/m2.

The BMI results can be classified as:

- BMI above 30 suggests that the person is obese (over 40 suggests morbid obesity).
- BMI above 25 indicates that the person is overweight.
- BMI of 18.5 to 25 indicates optimal weight.
- BMI lower than 18.5 suggest that the person is underweight.
- BMI below 17.5 may indicate the person has anorexia or a related disorder.

In the past two decades there has been a significant increase in the prevalence of asthma, and obesity in children worldwide ***(Chinn et al., 2005).*** It is possible that these events are linked. In children, excess body weight is associated with a higher rate of both symptoms and diagnosed cases of asthma ***(Weiss et al., 2004)***. However, in Taiwanese teenagers

obesity was associated with an increase in airway hyper responsiveness, and atopic symptoms in girls but not boys ***(Huang et al., 1999).***

A more recent study could not disclose any significant correlation between asthma as defined by bronchial hyper-responsiveness and obesity, and stressed that the reported associations might be due to miss-interpretation of noisy breathing in overweight subjects in questionnaire based studies ***(Wickens et al., 2005).***

Babak Amra et al., (2005) found that there was no significant correlation between BMI and obstructive spirometry. Increased BMI was significantly associated with an increased airway resistance. Despite the fact that higher BMI is a risk factor for, wheeze, dyspnea and diagnosed asthma, higher BMI is not a risk factor for obstructive pattern in pulmonary function tests.