Summary

Bronchial Asthma is a worldwide problem, with an estimated 300 million affected individuals, 15 million disability-adjusted life years (DALYs) lost annually and 250,000 annual deaths. Three wheezing phenotypes have been recognized; transient early wheezing, non-atopic wheezing (infection-induced wheezing) and atopic wheezing (asthma).

Asthma is a chronic inflammatory disorder of the airways. As in other chronic childhood diseases, impairment of growth may often be seen in children with asthma. In the past two decades, the prevalence of both asthma and obesity has increased dramatically.

In our study, we have searched for the growth changes that might occur in Egyptian children suffering from bronchial asthma as well as the relation between obesity and childhood asthma.

The study included 80 randomly selected children, aged 5-12 years, 60 patients suffering from bronchial asthma and 20 healthy age and sex matched children taken as a control group. The patients were divided into 2 groups one with atopic and the other with non-atopic asthma. The children were collected from Benha university hospital and Kasr El Aini Paediatric University Hospital from 1/12/2008 to 30/4/2009.

In our study, we found that 28.3% of our patients started experiencing asthma symptoms at the age of 5 years and that there was male predominance (70%).

Our study declared that asthmatics living in urban areas are more than those living in rural areas (71.7% and 28.3% respectively). This might be due to air pollution which is one of the important factors favoring this disease. There was no significant difference in growth parameters between both groups.

There was a significant decrease in height and skin fold thickness in asthmatics compared to those of the control subjects. This may be because asthmatics suffer troubles during sleep, especially stage IV, leading to impaired secretion of growth hormone. Also, pubertal delay is likely to explain the apparent growth failure in asthmatics, including retardation in height.

We found no significant differences in all growth parameters between atopic and non atopic asthmatics or between steroid users and steroid non-users, but, the mean values of weight and height were higher in the steroid users. This may be because steroid non-users suffer from poor asthma control which leads to long-term catabolic stress and severe sleep disturbance which interferes with the diurnal secretion of the anabolic hormones.

Our study showed that there is no significant difference in all growth parameters between asthmatics who began their symptoms at early age and those who started in late childhood, but the mean height was higher in those with late onset asthma. This could be explained by the shorter period of exposure to the factors that affect growth parameters among asthmatics of late onset.

Obesity was found to be a rare problem among the children included in our work. The relation detected in some other studies may be due to mis-interpretation of noisy breathing in overweight subjects.