Methods

A cross-sectional study was conducted in National Taiwan University Hospital in Taiwan from December 2009 till December 2011. Children with diagnosed asthma were recruited. Demographic data, asthma history, diet pattern and daily activity were recorded through questionnaires. Each child’s current weight and height were measured to acquire their age- and gender-adjusted BMI values. Asthma control level was defined by a summary score from the Children Asthma Control Test (C-ACT). Food frequency questionnaire (FFQ) was adopted to evaluate children diet pattern.

Introduction

The simultaneous increase in asthma and obesity prevalence has been widely discussed in past twenty worldwide. The prevalence for children asthma and obesity has been increased concurrently in Taiwan these years. The research finding related to the association between children asthma and obesity is still inconsistent and scanty in Taiwan.

Results

94 children with asthma were recruited. Higher BMI was correlated with a worse C-ACT score (OR 1.15, 95% CI 0.99 to 1.37). A more frequent intake of hamburger, oily snacks, sweetened drinks and chocolate or candies was associated with the worse asthma control (OR 1.85, 95% CI 0.89 to 3.99). Children from lower SES (OR 4.66, 95% CI 1.44 to 16.22), and born with mothers in older ages (OR 1.14, 95% CI 1.03 to 1.31). Children had better asthma control if their parents reported that the doctor had ever encouraged their children to engage in more physical activities (OR 0.21, 95% CI 0.05 to 0.80; p<0.02).

Conclusion

Higher BMI is correlated with a worse asthma control among children with asthma in Taiwan. A more intake of unhealthy food may also contribute to their asthma severity. Children with both epidemics form a unique group and should receive specific care. The role of diet pattern, maternal age at delivery, family social-economical status and physician’s encouragement to children’s exercise between the association of obesity and asthma in children need future investigations.

References

