ABSTRACT

Objective. Laryngomalacia is the most common cause of neonatal stridor accounting for approximately 60% of all infants presenting with stridor at or shortly after birth. The exact cause of laryngomalacia is unknown. Acoustic and cartilaginous theories were proposed, but the condition seems to be related to underdevelopment or abnormality of the peripheral nerves and brain stem nuclei responsible for breathing and airway patency which has been postulated and the condition may be accompanied by secondary airway lesions (SALs) and other comorbidities. An association with atopic disease was found in 11% of laryngomalacia patients. There is no clear-cut age at which the condition usually appears. The age at which the stridor starts may vary from the age of 12-24 months. The eosinophilic cationic protein (ECP) and other parameters have been used to determine specificity of asthma. In the current study, Asthma was present in 4 (10 %) children at school age. Food-specific IgE antibodies of ≥ 0.35 kU/L were found in 3 (7.5%) infants, but only specific IgE to wheat and to egg white at the level of ≥ 0.70 proved to be more specific predictive value for asthma. In the control group, Asthma was present in 1 (2.5%) children at school age. Food-specific IgE antibodies of ≥ 0.35 kU/L were found in 27 (42%) infants, but only specific IgE to wheat, egg white, or inhalant allergens were predictive of later childhood asthma. Consequently, detection of those specific IgE antibodies in those infants may facilitate the early diagnosis of asthma, especially in cases with no clinically evident atopic manifestations.

METHODS AND MATERIALS

A cohort of seventy consecutive infants diagnosed as having congenital laryngeal stridor “laryngomalacia” before 18 months of age was followed prospectively until early school age. Serum levels of food and inhalant allergen-specific IgE antibodies were determined at presentation, using the CAP system (Pharmacia, Uppsala, Sweden). At 6-8 years, children were evaluated for asthma and allergic manifestations, including skin prick tests to common inhalant allergens.

RESULTS

Among infants with laryngomalacia, followed, Six infants were lost to follow-up, and only 64 children completed the study. Asthma was present in 9 (14%) children at school age. Food-specific IgE antibodies of ≥ 0.35 kU/L were found in 7 (11%) infants, but only specific IgE to wheat and to egg white at the level of ≥ 0.35 kU/L, were significantly associated with later asthma. In univariate analysis, a cutoff level of 0.35 proved to be significant. In the control group, Asthma was present in 4 (10 %) children at school age. Food-specific IgE antibodies of ≥ 0.35 kU/L, were found in 16 cases (25%), and only specific IgE ≥ 0.70 proved to be significant. Inhalant-specific IgE (IgE ≥ 0.35 kU/L) was found in 4 cases (10%). The difference in the incidence of asthma in both groups was not statistically significant.

DISCUSSION

Unlike a wheezing baby, infants with laryngomalacia, were found to have no higher risk to develop asthma later on. Although in some cases of laryngomalacia, the airway may be seriously compromised, yet this has not proven to affect later susceptibility for asthma. Specific IgE antibodies to food and/or inhalant allergens were proved to have a more specific predictive value for development of asthma and our work supports this finding. The exact cause of laryngomalacia is not clear although immunity of the muco-cutaneous regulation of laryngeal functions, seems to be a important step.overall, laryngomalacia have a similar risk to develop asthma as normal infants.

CONCLUSIONS

Although this cohort is of a limited number to get valid clues, yet it may give an inference of a no more risk for later asthma in infants presenting with laryngomalacia.

REFERENCES