Analysis of the related factors of attention deficit/hyperactivity disorder and allergic rhinitis in children

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Abstract

Objective: To investigate the association between symptom of attention deficit/hyperactivity disorder (ADHD) and allergic rhinitis (AR) in children with AR at different sexes and different ages.

Method: A total of 439 AR children aged 6 to 12 years were enrolled in this study. Basic information (age, gender, medical history, family history and comorbidities) of children with AR was collected. Results of prick tests on children skin were recorded. (TNSS) and Chinese version of the SNAP-IV scale, children under the guidance of independent completion of children's quality of life of children with nasal conjunctivitis scale (PRQLQ). According to the results of SNAP-IV, children were divided into AR with ADHD group [attention deficit and hyperactivity symptom score (IHS) >1.25] and AR without ADHD group (IHS≤1.25). The differences between the two groups of children were analyzed using group t-test and χ² test, and the relationship between each parameter and IHS >1.25 was analyzed by binary logistic regression.

Result: Using SPSS 22.0 software, among all the included AR children, IHS >1.25 children accounted for 26.4%, IHS >1.25 group AR symptom scores were significantly higher than HIS ≤1.25 groups. Univariate analysis showed that children with age, gender, duration of AR symptoms, skin index and PRQLQ subscales had a correlation with IHS >1.25. After controlling for age and gender, duration of AR symptoms and skin index correlated with IHS >1.25 The estimated OR values are 1.807 (95%CI: 1.350-2.419) and 1.912 (95%CI: 1.320-2.772), respectively. The estimated OR values of PRQLQ subscale and IHS >1.25 were 1.657 (nasal symptom score), 1.324 (eye symptom score), 2.48 (non-eye-nasal symptom score), 1.418 (Behavior problem score) and 2.045 (activity and sleep score). The correlation between IHS>1.25 and the skin index and PRQLQ subscales was mainly found in males with stratification of age and gender, and the association between duration of AR symptoms and HIS >1.25 was statistically significant among all groups reflected.

Conclusion: The association between attention deficits and hyperactivity symptoms in AR children was correlated with the severity of AR symptoms, duration, and skin index, and this association was more pronounced in males. In children with AR and ADHD, early management of AR symptoms may improve their ADHD symptoms.