Role of interleukin-6 polymorphisms in the development of allergic rhinitis

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ABSTRACT. The aim of this study was to investigate the role played by the IL-6 rs1800795 (-174G/C) and rs1800796 (-572G>C) polymorphisms in the susceptibility to allergic rhinitis in a Chinese population. A total of 265 patients with allergic rhinitis and 265 controls from our hospital were enrolled in this study. The IL-6 rs1800795 and rs1800796 polymorphisms were genotyped by polymerase chain reaction coupled with restriction fragment length polymorphism. The results of the \(\chi^2\) statistical analysis revealed significant differences in the allele frequencies of IL-6 rs1800795 between patients with allergic rhinitis and controls (\(\chi^2 = 4.52, P = 0.03\)). Multivariate logistic regression analyses revealed that individuals with the C allele of IL-6 rs1800795 were susceptible to increased risk of allergic rhinitis, compared to those expressing the G allele (adjusted OR = 1.31; 95%CI = 1.01-1.68). In conclusion, the results of our study indicated that the IL-6 rs1800795 polymorphism was associated with an increased risk of allergic rhinitis.

Key words: Interleukin-6; Polymorphism; Allergic rhinitis