

Association between Two TIM-1 Promoter SNPs (-416G>C and -1454G>A) and Allergic Rhinitis in Egyptian Patients

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Abstract

T cell/transmembrane immunoglobulin and mucin (TIM) molecules have a critical role in regulating immune responses. TIM-1, which is highly polymorphic in human, has many nucleotide polymorphisms (SNPs) that have been studied for their role in allergic diseases, but the results were not consistent. The aim of study was to investigate the possible association between two TIM-1 promoter SNPs (-416G>C and -1454G>A) and allergic rhinitis (AR) in Egyptian patients sensitized to house dust mites. A further aim, was to assess the relationship between these SNPs and the level of house dust mites specific IgE. In a case-control study, a total of 30 AR patients who had positive skin prick test (SPT) to house dust mites were compared to 20-matched healthy volunteers regarding the two SNPs using restriction fragment length polymorphism (RFLP) technique. House dust mites specific IgE was measured in both groups using ELISA test and the results of both groups were compared. TIM-1 promoter SNPs (-416G>C & -1454G>A) were not significantly associated ($P > 0.05$) with AR in Egyptian patients sensitized to house dust mites. Furthermore, no significant association ($P > 0.05$) was found between the different genotypes at these SNPs and the level of house dust mites specific IgE. TIM-1 promoter polymorphisms (-416G>C & -1454G>A) do not contribute to the risk of development of AR in Egyptian patients.