

Evaluation of Soluble HLA-G Serum Level as Diagnostic Biomarker in Allergic Rhinitis Patients and its Association with Specific IgE Levels

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About 30 % of people are affected by allergic rhinitis (AR). Allergic rhinitis is an inflammatory condition defined by a disturbance of immunoregulation generating an amplified T helper "Th-2" response. An inflammatory mechanism mediated by HLA-G is thought to be involved through initiation of Th2 cytokine profile releasing "interleukin IL-3, IL-4, and IL-10". We evaluated levels of soluble HLA-G "sHLA-G" and studied its association with "allergen specific IgE" in AR patients. Twenty-five AR patients and twenty healthy subjects were enrolled. sHLA-G levels (U/ml) were measured by an immunoenzymatic method, while specific IgE levels (IU/ml) of respiratory allergens were analyzed using immunoblotting assay. The results revealed that AR group has significantly higher serum sHLA-G levels than normal subjects, $P<0.001$. There was a highly significant and positive correlation between sHLA-G levels and specific IgE levels of *Alternaria alternate* and *Dermatophagoides pteronyssinus* ($P<0.01$). Besides, there was a significant ($P<0.05$) positive correlation between sHLA-G levels and specific IgE levels of brich and mixed grasses. We concluded that serum sHLA-G level is significantly increased in AR patients and that serum sHLA-G level could be a diagnostic biomarker in AR patients for clinical severity assessment.