

## Assay of IL-22/IL-25 in serum, whole blood and peripheral blood mononuclear cell cultures of patients with severe asthma

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**Aim:** Although, some studies on the airway show IL-22/IL-25 play a critical role in the pathogenesis of asthma but there are little documents about the systemic production of these cytokines. Therefore, the aim of this study was IL-22/IL-25 assay in serum, in mitogen activated of whole blood (WB) and in mitogen activated of peripheral blood mononuclear cells (PBMCs) cultures of patients with severe asthma.

**Materials & methods:** In this cross sectional study, to determine the severity of the asthma, a questionnaire was prepared. The questionnaire asked information including clinical signs, clinical symptoms, and past medical history so all active or ex-smoker patients were excluded. Then a trained observer assessed airway reversibility, peak flowmetry and spirometry in the patients. Twenty one patients with severe asthma and simultaneously, twenty age-sexes matched healthy controls were selected. Ten ml sterile blood was taken from each person. The sera were isolated and anticoagulant bloods used to WB and PBMCs cultures and hematological tests. Phytohemagglutinin (PHA) and Lipopolysaccharide (LPS) used to activate WB and PBMCs. Data of two groups were compared with Student's t-test and non parametrical statistic test.

**Results:** Except total white blood cells count that was increased in asthmatic group, other hematological indices and IL-22/IL-25 levels in two groups were not significantly ( $p < 0.05$ ) different.

**Conclusion:** The levels of IL-22/IL-25 in patients with severe asthma are not higher than healthy people and their roles in asthma can related to local immunological process.

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