

Summary

Asthma is a chronic inflammatory disease of the airways in which many cells and cellular elements play a role. Causes recurrent episodes of wheezing, breathlessness, chest tightness, and coughing. These episodes cause airflow obstruction, often reversible either spontaneously or with treatment. The current study was conducted at the Labs of college of Education for pure science and Al-Hussein Teaching Hospital in Thi-Qar province, during the period from October 2014 to May 2015. The study aimed to investigate role of polymorphism of IL-13 gene in patients with asthma and to evaluate their immune status by measuring the levels of some immunological parameter immunoglobulins (IgE) by enzyme-linked immunosorbent assay (ELISA) and (IgG, IgM) by single radial immune diffusion (SRID) and measure the levels of interleukins (IL-6, IL-17) in the serum using enzyme-linked immunosorbent assay (ELISA), the study included test phagocytic cells on phagocytosis (coefficient of phagocytosis) and the total and differential count of white blood cells .

A total of 100 patients with bronchial asthma (68 females) and (32 males) whose age lies between 17-62 years have enrolled in this study. DNA was extracted and RFLP-PCR was performed by using primers specific for the gene IL-13, the results showed the presence of mutations in a48 sample out of 100 patients with asthma at site 1112C/T after using restriction enzyme BstUI. the statistical analysis showed correlation between the occurrence of the disease and the emergence of mutation (C / T) in the promoter region of IL-13 gene when compared with the healthy control in population of Thi-Qar province .

When it was compared the patient group with healthy control group there was a high significant increase ($P \leq 0.001$) in serum IgE, IgG of patients with asthma compared with healthy control group. And no significant difference in serum IgM of patients with asthma compared with healthy control group. Decrease coefficient

leucocytosis was significantly ($P \leq 0.001$) in all patients with asthma compared with healthy control group. Levels of interleukin (IL-6, IL-17) measured in serum of 60 a sample of patients with asthma, and in the serum of 20 samples from healthy control group. The results showed a significant increase ($P \leq 0.001$) in the levels of these interleukins in the serum of patients with asthma compared to the control group.

Also there was increased in the rate of counting the total of WBCs and differential cell lymphocytes, eosinophil, neutrophil, basophil, and monocyte ($P \leq 0.001$) in patients with asthma compared with the healthy people in the control group.

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