

Association of IL-17 serum level with clinical findings and Systemic Lupus Erythematosus Disease Activity Index (SLEDAI) in patients with SLE in northwest of Iran

Background and objective: Systemic lupus erythematosus (SLE) is a rather common disease with involvement of various organs. This autoimmune condition occurs due to the production of different autoantibodies against host antigens, leading to systemic inflammation in the body. Recently, it has been shown that the level of serum interleukin 17 (IL-17) is significantly higher in these patients compared to that in normal conditions, and because of its association with body inflammation, some investigators have considered it in the pathophysiology of the disease. This study aims to examine a connection of the level of serum IL-17 with clinical findings and disease activity index (SLEDAI) in patients with SLE.

Methods & Materials: A total of 36 patients with SLE (the case group) and 40 age- and sex-matched healthy counterparts as the control group were enrolled in this case-control study. The level of serum IL-17 was measured and compared between the two groups. In addition, a possible connection between the level of serum IL-17 with disease activity (according to SLEDAI) and organ involvement investigated, as well.

Results: The case group was comprised of 4 males and 32 females with the mean age of 35.31 ± 9.28 years (17-54), and the control group included 6 males and 34 females with the mean age of 37.10 ± 7.43 years (25-53) ($p=0.74$ and 0.35 , respectively). The median level of serum IL-17 was significantly higher in cases than in controls (0.21 OD vs. 0.08 OD, $p<0.001$). In the case group, there was a significant, positive correlation between the level of serum IL-17 and disease activity ($p<0.001$, $\rho=0.99$). In the same group, the level of serum IL-17 was also significantly higher in patients with renal/central nervous system (CNS) involvement compared to the patients without such involvements.

Conclusion: Serum IL-17 is associated with SLE, its activity and renal/CNS involvement.

Keywords: Systemic Lupus Erythematosus, Interleukin 17, Disease Activity Index.