



Serum Levels of Cytokines Related to TH17 Cells in Patients with Osteoarthritis

Alireza Askari ¹, Mohammad Mehdi Naghizadeh ¹, Reza Homayounfar ¹, Abbas Shahi ², Abbas Paknahad ³, Mohammad Reza Ataollahi ¹

1- Noncommunicable Diseases Research Center, Fasa University of Medical Sciences, Fasa, Iran

2- Student Research Committee, Fasa University of Medical Sciences, Fasa, Iran

3- Student Research Committee, Hormozgan University of Medical Sciences, Bandar Abbas, Iran



Background & Objective: Osteoarthritis (OA), is the most common type of arthritis. The proinflammatory cytokines have been considered as the main etiologic factor in OA pathogenesis. Although serum levels of cytokines related to innate immunity and TH1 cells have been analyzed throughoutly in OA patients, but there is little evidence about the profile of cytokines related to TH17 cells. The aim of this study was the assessment of serum level of IL-17 and IL-21 cytokines in sera of patients with OA compared to Healthy controls.

Materials & Method: The sera from 207 patients with OA and 111 healthy controls were checked for IL-17 and IL-21 using ELISA technique. Independent sample t tests, Chi square test, Pearson test and logistic regression was used for statistical analyses. All statistical analyses were performed using SPSS 20 software.

Result: The serum levels of IL-17 were significantly higher in patients with OA than healthy controls ($P < 0.001$). Significant correlation was found between the serum level of IL-17 and WOMAC pain score. On the other hand, the serum level of IL-21 was not different between patients with OA and normal group ($P > 0.05$). Moreover, the serum level of IL-17 in patients with OA was not correlated with WOMAC pain score.

Conclusion: Our data suggest that the IL-17 has a significant role in OA pathogenesis and related to pain in OA. Prevention of IL-17 signaling pathway may be useful in pain treatment in OA.

Key words: Osteoarthritis, TH17, WOMAC