

# Oral Immunology

## Oral Presentations:

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Interleukin-17 and Interleukin-23 Levels in gingival crevicular fluid of patients with chronic and aggressive periodontitis

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**Background:** Th-17 is a novel subtype of lymphocytes that seems to play an important role in pathogenesis of cell-mediated tissue damage caused either by autoimmunity or immune responses against microbial infection. They produce IL-17 which is a pro-inflammatory cytokine. The role of IL-23 is stabilization and expansion of Th-17. Since periodontitis is an inflammatory disease of tooth supporting tissues, the aims of this study was to assess 1) the concentrations of IL-17 and IL-23 in gingival crevicular fluid (GCF) of chronic and aggressive periodontitis and 2) their correlation with clinical parameters. **Materials:** After periodontal examination and supra-gingival prophylaxis, GCF samples were collected with periopaper strips from 32 individuals (10 moderate to severe chronic periodontitis, 12 aggressive periodontitis and 10 healthy). Then samples were transferred to an airtight micro tube and stored at -20°C. IL-23 and IL-17 concentration was measured using enzyme – linked immunosorbant assay (ELISA). Comparison of study groups was performed by ANOVA and Tukey HSD test. Spearman correlation coefficient was used to assess correlation between the variables. **Results:** IL-17 and IL-23 concentrations were significantly higher in the healthy group than the periodontitis group, but there was no significant difference between chronic and aggressive periodontitis. Cytokine concentrations were not significantly correlated with probing depth and clinical attachment level. **Conclusion:** With respect to the result of this study, IL-17 & IL-23 concentration may play a role in early destructive phase of periodontal disease. Yet, exact role of Th-17 in pathogenesis of periodontal disease is not clear.

**Keywords:** Interleukin-17, Interleukin-23, Gingival Crevicular Fluid, Chronic Periodontitis, Aggressive Periodontitis