The balance between the anti- and pro-inflammatory cytokines was attributed to have an important role in the periodontal disease pathogenesis. Despite the unique features (familial aggregation, rapid rate of tissue destruction, the age of onset, etc.) of the disease, the mentioned imbalance may modulate the disease progression in aggressive periodontitis (AP). In this study, we aim to investigate the levels of Interleukin (IL)-11 and -17 and their ratio in Gingival Crevicular Fluid (GCF) of AP patients compared to healthy controls (HC). Twenty-eight patients with AP, 20 healthy controls (HC) were included. The AP group was divided into two groups according to pocket depths (PD) (a: PD \( \leq 3 \) mm, b: PD \( > 4 \) mm). For each patient, clinical parameter values were recorded. The IL-11 and IL-17 levels were evaluated by ELISA. The IL-17 concentration in AP-a group was higher and the concentration of AP-b group was lower than the HC group (\( P < 0.0125 \)). The total amount and concentration of IL-11 in AP-a group were not found significantly different than
HC (P > 0.0125). The total amount and concentrations of both cytokines were found significantly lower in AP-b group compared to the AP-a (P < 0.0125). In AP-a group a significant negative correlation between the total amount of IL-17 and plaque index score in sampling site was found (P = 0.028). Further studies evaluating the levels and ratio of IL-11 and IL-17 with the accepted key cytokines are needed to clarify their role in AP pathogenesis.