

The Role of Interleukin-1 Haplotype in the Association between Atherosclerosis and Periodontitis in a Syrian Population

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ABSTRACT The role of Interleukin-1 haplotype in the association between chronic periodontitis and atherosclerosis has been established in previous studies. However, no studies of this type have been carried out in Syria to assess such a role. Therefore, the purpose of this study is to compare the frequencies of interleukin1 haplotypes in the chronic periodontitis subjects with and without atherosclerosis in a Syrian Arab population. Two hundred Syrian Arab chronic periodontitis patients (184 males, 16 females; mean age 52.61) were divided into two groups: first group was subjects with atherosclerosis; second group was 100 subjects without atherosclerosis. Blood samples were collected from the patients for genotyping analysis of IL-1 α +4845, IL-1 β +3954, IL-1 β -511 and IL-1RN VNTR using PCR-RFLP technique. Chi-square test was used for the statistical study ($P < 0.05$) with SPSS.V17 and EH program for studying interleukin-1 haplotype. Significant differences in the frequencies of interleukin-1 haplotypes between atherosclerosis and non- atherosclerosis groups were shown ($p = 0.0148$). Pattern2 – which includes allele2 at both the IL-1 β -511, and at the IL-1RN VNTR as well as allele1 at both loci of IL-1 β +4845 and IL-1 β +3954 - was significantly higher in atherosclerosis group vs. non-atherosclerosis group (20%-10%). These findings may suggest that Pattern2 is associated with increased susceptibility to atherosclerosis.