



Association between *IL-1* α rs17561 and *IL-1* β rs1143634 polymorphisms and periodontitis: a meta-analysis

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ABSTRACT. Genetic variations in human interleukin-1 (*IL-1*) genes are known to be involved in inflammatory disorders. The rs17561 and rs1143634 polymorphisms of *IL-1* α and *IL-1* β , respectively, have been increasingly recognized as important regulators in the development of periodontitis. However, the existence of a specific association remains controversial. Therefore, we performed a meta-analysis to explore the relationship between *IL-1* polymorphism and periodontitis risk. Based on our inclusion criteria, six case-control studies were used, involving a total of 336 periodontitis cases and 366 healthy controls. Our meta-analysis results showed that the T allele of *IL-1* α rs17561 is positively associated with periodontitis susceptibility. In addition, carriers of this allele (TC + TT genotypes) demonstrated increased risk of this disease. The *IL-1* β rs1143634 T allele was also positively connected to periodontitis, with TC + TT genotype carriers being significantly more at risk. These results demonstrate that the *IL-1* α rs17561 and *IL-1* β rs1143634 polymorphisms are associated with periodontitis.

Key words: Interleukin-1 gene; Genetic polymorphism; Periodontitis; Meta-analysis