HUBUNGAN POLIMORFISME GEN VITAMIN D RESEPTOR DENGAN PERIODONTITIS KRONIS

(POLYMORPHISM OF VITAMIN D RECEPTOR GENE IS ASSOCIATED WITH CHRONIC PERIODONTITIS)

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Abstract

Chronic periodontitis is caused by enhanced resorption of the alveolar bone supporting the teeth and is associated with intraoral inflammation after infection with certain bacteria. Genetic polymorphisms in vitamin D receptor (VDR) gene are associated with bone homeostasis and immunological reaction. The aim of this study was to determine whether polymorphism in VDR gene exons is associated with the incidence of chronic periodontitis. A case-control study was performed on a group of 162 subjects whose ages ranged from 25 to 60 years, were divided into two groups: 81 healthy individuals (control group) and 81 subjects with chronic periodontitis. The polymorphism in the VDR gene was analyzed by polymerase chain reaction, followed by TaqI restriction endonuclease digestion. The result showed that the polymorphism in the vitamin D receptor gene was found in chronic periodontitis with TT genotype (86.4%), Tt genotype (12.4%), and tt genotype (1.2%). This study also determines TaqI polymorphism of the VDR gene is associated with the incidence of chronic periodontitis case (OR 12.57; CI: 1.6-99.8). In conclusion, polymorphism of the vitamin D receptor gene is associated with the incidence of chronic periodontitis (OR 12.57).

Key words: chronic periodontitis, polymorphism, Vitamin D receptor