

Host Responses in Peri-Implant Tissue in Comparison to Periodontal Tissue

Authors : Raviporn Madarasmi, Anjalee Vacharaksa, Pravej Serichetaphongse

Abstract : The host response in peri-implant tissue may differ from that in periodontal tissue in a healthy individual. The purpose of this study is to investigate the expression of inflammatory cytokines in peri-implant crevicular fluid (PICF) from single implant with different abutment types in comparison to healthy periodontal tissue. 19 participants with healthy implants and teeth were recruited according to inclusion and exclusion criteria. PICF and gingival crevicular fluid (GCF) was collected using sterile paper points. The expression level of inflammatory cytokines including IL-1 α , IL-1 β , TNF- α , IFN- γ , IL-6, and IL-8 was assessed using enzyme-linked immunosorbent assay (ELISA). Paired t test was used to compare the expression levels of inflammatory cytokines around natural teeth and peri-implant in PICF and GCF of the same individual. The Independent t-test was used to compare the expression levels of inflammatory cytokines in PICF from titanium and UCLA abutment. Expression of IL-6, TNF- α , and IFN- γ in PICF was not statistically different from GCF among titanium and UCLA abutment group. However, the level of IL-1 α in the PICF from the implants with UCLA abutment was significantly higher than GCF (P=0.030). In addition, the level of IL-1 β in PICF from the implants with titanium abutment was significantly higher than GCF (P=0.032). When different abutment types was compared, IL-8 expression in PICF from implants with UCLA abutment was significantly higher than titanium abutment (P=0.003).

Keywords : abutment, dental implant, gingival crevicular fluid and peri-implant crevicular fluid

Conference Title : ICDIO 2017 : International Conference on Dental Implants and Orthodontics

Conference Location : Singapore, Singapore

Conference Dates : September 11-12, 2017