Influences of different fused metal crown on inflammatory cytokines, adhesion molecules, OPG/RANKL expression in tissue around implant

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[Foundation Project]: Clinical medical research foundation of Wuhan city health bureau (grant No. WZ13A02)

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Received: 2014-11-17 Revised: 2014-11-26

View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To investigate the influences of different fused metal crown on inflammatory cytokines, adhesion molecules, OPG/RANKL expression in tissue around implant. Methods: A total of 90 patients received fused metal crown restoration in our hospital were enrolled and divided into three groups including Ni Cr alloy group, CO-Cr alloy group and gold alloy group, which underwent Ni-Cr alloy repair, CO-Cr alloy repair, gold alloy repair, respectively, with 30 cases in each group. Then expression of inflammatory cytokines, adhesion molecules, OPG/RANKL in gingival sulcus fluid were detected and compared. Results: (1) Inflammatory cytokines; IL-6, NO and MMP2 content of Ni-Cr alloy group were higher than those of CO-Cr alloy group and gold alloy group; (2) adhesion molecules; sICAM-1, sVCAM-1, E-cadherin content Ni-Cr alloy group were higher than those of CO-Cr alloy group and gold alloy group; (3) OPG/RANKL; RANKL content and RANKL/OPG ratio of Ni-Cr alloy group were higher than those of CO-Cr alloy group and gold alloy group; OPG contents were lower than those of CO-Cr alloy group and gold alloy group. Conclusion: The stimulation of Co-Cr alloy and gold alloy fused metal crown are weaker, inflammatory cytokines, adhesion molecules, OPG/RANKL in gingival crevicular fluid are low-

[KEY WORDS] Fused metal crown; Inflammatory factor; Adhesion molecule; Receptor activator nuclear factor kappa B ligand; Osteoprotegerin