Comparing the implant stability and radiographic crestal bone loss between HA/coated and RBM short Dentis implants in posterior maxilla

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Abstract

Background and Aim: The current study compared the implant stability and radiographic crestal bone loss between HA/coated and RBM short Dentis implants in posterior maxilla.

Materials and Methods: In this single-blind controlled clinical trial, 30 implants (15 RBM and 15 HA/coated Dentis implant) were placed bilaterally symmetrical or beside each other in posterior maxilla of 15 patients. All implants were placed in either the second premolars or the first and second molars area of maxilla. Implant stability and degree of crestal bone loss were recorded using Periotest and standard parallel radiography on the day of surgery, 1 and 3 months post surgery, and 3 months after loading the implant. Repeated measures ANOVA and T-test were used for data analysis .

Result: There was no statistically significant difference between the mean implant stability of the two implant surface at the baseline (-3.77±0.71), 1 (-3±0.77) and 3 months after surgery (-5.07±0.50), and 3 months after loading (-5±0.48) (P=0.67). The mean radiographic crestal bone loss revealed no statistically significant difference between the two implant types at baseline (P=0.42); however it was considerably lower in HA/coated implants at 1 and 3 months after surgery and 3 months after loading. (P<0.05)

Conclusion: Since bone loss surrounding short dental implants is an important issue , it is recommended to use short implants with rougher surface (like HA/coated) in areas with poor bone quality.

Keywords: *Dental implant; Hydroxyapatite-coated titanium alloy; Osseointegration; Alveolar bone loss/ diagnosis*

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