

اثرات بارگذاری فوری روی نسوج اطراف ایمپلنت در موفقیت درمان بیماران با پروتز ثابت خلفی متکی بر ایمپلنت

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Title: Evaluation of treatment success of immediate loading on periimplant tissues in patients with posterior fixed implant-supported prosthesis

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Introduction:

According to the conventional protocol, a stress-free healing period of 3-6 months is one of the most emphasized requirements for implant integration. Long duration of this period has always been a matter of patient's dissatisfaction, so recent studies have encouraged a progressive shortening of the healing period and immediate loading has been proposed to meet this purpose. The aim of this study was to evaluate the clinical response and success rate of immediately loaded implants and comparing it with delay loaded implants.

Materials & Methods:

This study is a clinical trial-study. 12 patients (4 males and 8 females), with age range of 28-58 years (mean age 45.9 ± 7.7 years), presenting posterior partially edentulous maxilla or mandible, were enrolled in this study. A total of 28 Xive implants (Friadent Densply; Manheim, Germany) were placed in these patients and randomly divided into two groups (14 implants in test group and 14 implants in control group). The diameter of the implants were 3.5 to 4.5 mm and their length were 9.5 to 13mm. One of the test group implants was excluded from the study due to lack of primary stability at surgery. Test group implants were immediately loaded within 24 hours after surgical placement with an temporary acrylic resin restoration. Control group implants were left to heal submerged for 3 to 4 months and then were loaded with FRC (GC-Gradia. GC Europe N.V) permanent restorations (delayed loading). Each implant was evaluated every two months until the 8th month considering the following parameters: Plaque index (PI), bleeding index (BI), probing depth (PD), mobility, pain and bone resorption (BR). Periimplant bone resorption was evaluated on periapical radiographs with standardized parallel technique, and RVG software. After data collection, Statistical analysis was performed using SPSS (Version 11.5) and by means of ANOVA and Student's t-test. The significance level was adjusted at 0.05.

Results:

Two implants in the test group failed, therefore the implant survival rates in test and control groups were 87% and 100% respectively. No significant statistical difference was observed between the two groups in plaque index and probing depth. No pain, bleeding on probing or mobility were observed in all recalls. Mean bone resorption of periimplant bone height mesially and distally after 8 month was 0.26mm ± 0.32 in test group and 0.98mm ± 0.59 in control group. This difference was statistically significant (P=0.011).

Conclusion:

Periimplant bone resorption in immediate loading implants was significantly lower than that of delayed loading ones.

Key word:

Implant, immediate loading, delayed loading.

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