P-SU-22

CLINICAL INNOVATIONS

"Osseodensification Crestal Sinus Floor Elevation with or without Synthetic and Resorbable Calcium Phosphosilicate Putty"

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Background

Adequate bone volume surrounding dental implants at the time of implant placement has been suggested as a contributing factor for stable peri-implant bone levels. Bone height and density are often limited in the posterior maxilla. Sinus floor elevation is indicated to overcome these anatomical challenges.

Background and Aim

The aim of this study was to clinically and radiographically evaluate Osseodensification Crestal Sinus Floor elevation, with and without synthetic and resorbable calcium phosphosilicate putty (Novabone).

Methods and Materials

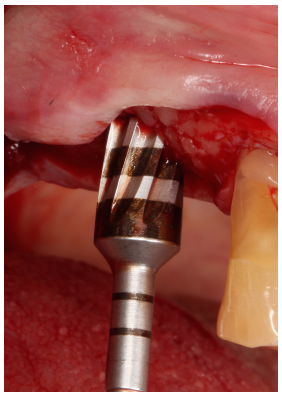
Forty-two implants (Astratech EV) were place in 28 patients using either Osseodensification alone (group 1, n=21) or Osseodensification combined with synthetic and resorbable calcium phosphosilicate putty (group 2, n=21). Insertion torque and RFA values were recorded. All implants were allowed to heal submerged, and restored at 4 months. Patients were re-evaluated at 6 and 12 months.

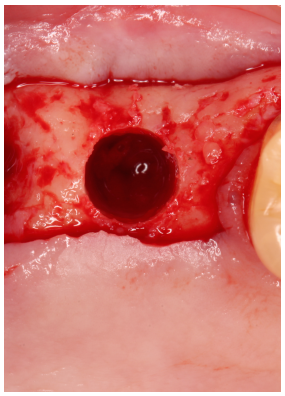
Results

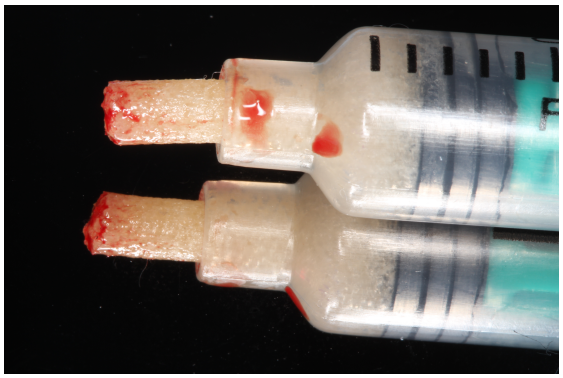
No adverse events or complications were observed throughout the study. All implants were successfully restored at 4 months, and remain in function since then. No statistically significant differences were observed in mean insertion torque values (group 1: 36.4 Ncm; group 2: 39.1 Ncm) or RFA values (group 1: 74.4; group 2 78.2) Group 2 demonstrated statistically significant superior gains of alveolar ridge height (group 2: 5.9 mm) when compared to group 1 (2.8 mm). All patients were satisfied with both treatment options and reported minimal post-op discomfort.

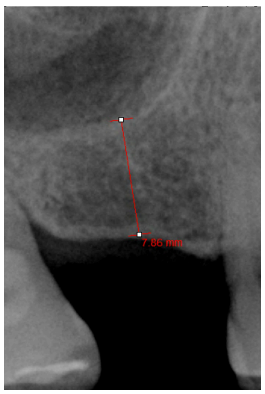
Conclusions

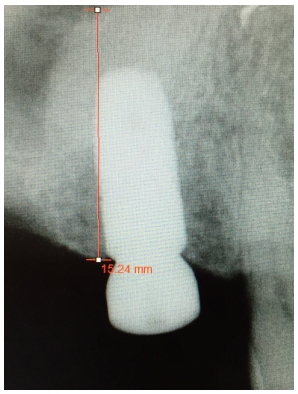
Osseodensification Crestal Sinus Floor elevation is a predictable and safe method for simultaneous placement of dental implants in the posterior maxilla. Osseodensification promotes adequate insertion torque values in areas of reduced bone height and density for predictable osseointegration of dental implants. Synthetic and Resorbable Calcium Phosphosilicate Putty use in combination with Osseodensification promotes additional vertical augmentation when compared to drilling with Osseodensification burs alone.











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