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”

The Use of Cancellous Block Allograft For Sinus Floor Augmentation With Simultaneous Implant Placement in the Posterior Atrophic Maxilla”*

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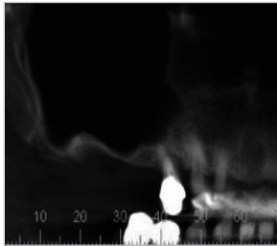
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maxilla. J Periodontol. 2009, 80(3):422-428



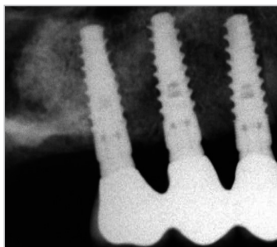
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ABSTRACT.



Preoperative CT scan showing minimal alveolar bone between the alveolar crest and the maxillary sinus floor. R=right; B=buccal; P=palatal.



Radiograph of the final prosthetic restorations taken 22 months after loading.

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Background

The simultaneous placement of dental implants during sinus augmentation is advocated in cases in which ≥ 4 to 5mm of alveolar bone exists coronally to the sinus floor. The aim of the present study was to assess the survival rate of dental implants placed during sinus augmentation and stabilized by the use of cancellous freeze-dried block allograft. Residual alveolar ridge height ≤ 4 mm was an inclusion criteria.

Materials and methods

Twenty-eight consecutive patients (13 females and 15 males) aged between 25 and 65 years (mean, 54 ± 9 years) were referred for implant-supported reconstruction of the posterior atrophic maxillae. Seventy-two implants (two to four per patient) were placed. No case presented difficulty in achieving initial stabilization. Relatively small membrane tears (5 to 10 mm) were observed in 21.4% of the sinuses. There were no other clinically evident complications of the sinuses. Sixty-eight implants were clinically osseointegrated, yielding a 94.4% success rate, whereas four implants were noted to be failed at the second stage. Three months later, implants were inserted at the previously failed implant sites; after 3 additional months, at the second stage, they were diagnosed as osseointegrated. All patients received a fixed implant-supported prosthesis.

Results

The mean follow-up was 27 months (range, 11 to 46 months). Radiographs taken at the last follow-up demonstrated that the vertical augmented bone within the sinus ranged from 11 to 14 mm (mean, 12.3 mm). The histologic evaluation showed newly formed bone containing viable osteocytes merged with residual grafted bone, characterized by empty lacunae devoid of osteocytes.

Conclusions

The cancellous block allograft seems to possess potential as a grafting material for sinus floor augmentation with simultaneous implant placement.