

**Preservation of Inferior Alveolar Canal and Insertion of Implant in the Posterior Atrophic
Mandibular Bone**

Running head: Preservation of Inferior Alveolar Canal

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Abstract

Aims: Dental implants have become a widely accepted treatment modality for patients with edentulous posterior mandibles. We aimed to introduce a novel approach that can be used for the placement of implants without the need for bone augmentation and nerve repositioning from use of splinted mini or narrow- or regular-size implants with or without telescopic crowns placed in the buccal aspect of inferior alveolar canal.

Methods: 22 class-one Kennedy partially edentulous patients with severe atrophy of the mandibular bone with bone height less than 6mm above the inferior alveolar canal (IAC) were selected. In every sextant, two one-piece mini-implants were placed with 3mm distance as posterior retainer and also one regular implant was placed as anterior retainer. After a healing period of 4 months, posterior implants were splinted with telescopic crown and paralleled with anterior abutments. Cone Beam Computed Tomography (CBCT) was done before placement of implants. Marginal bone level, plaque index, bleeding on probing, and probing depth were assessed after two years.

Results: The mean value of marginal bone loss around the implants was 1.7mm and 2.1mm for posterior and anterior implants after 2 years, respectively. Bleeding on probing were 35% around posterior and 20% around anterior implants. Mean value of probing depth was 1.5 mm around posterior and 2.5 mm at anterior implant sites.

Conclusion: Mandibular atrophic bone with less than 6 mm height above the inferior alveolar canal could be treated with splinted mini or even regular implants placed in the lateral aspect of IAC.

Keywords: Implant, Atrophic Mandibular Bone, New Technique

