

**A 3-YEAR CLINICAL AND RADIOGRAPHIC STUDY OF IMPLANTS PLACED SIMULTANEOUSLY WITH MAXILLARY SINUS FLOOR AUGMENTATIONS USING A NEW NANOCRYSTALLINE HYDROXYAPATITE.**

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**ABSTRACT**

The aims of this case series was to evaluate the success rate of implants and their restorations, the sinus bone graft resorption, and the marginal bone loss around the implants when nanocrystalline HA embedded in a silica matrix was exclusively used as grafting material. In 13 partially edentulous patients of a private practice having missing teeth in the posterior maxilla and a subantral bone height between 3 and 7 mm, 19 sinus augmentations (100% Nanobone, Artoss, Rostock, Germany) by the lateral lift technique were performed. The implants (TioloX/Tiologic Implants, Dentaureum, Ispringen, Germany) were simultaneously placed. After 6 to 9 months 37 implants were restored with fixed dental prostheses. The radiographic bone heights over time were estimated with linear mixed models. The implant success rate was 100% after three years. The mean rates of the marginal bone loss over the first year were higher (mesial: -0.55, distal: -0.51 mm) than the annual rates thereafter (mesial: -0.09 mm, distal: -0.08 mm). The mean rates of changes in the total bone height were neglectable (< 0.2 mm) and not significant. The prosthodontic and esthetic evaluation revealed a successful outcome. Within the limits of this clinical report it may be concluded that maxillary sinus augmentation using 100% nanocrystalline HA embedded in a silica matrix to support implants is a reliable procedure.