J Oral Implantol. 2016 Aug;42(4):343-8. doi: 10.1563/aaid-joi-D-15-00157. Epub 2016 Mar 9.

Use of Implant-Derived Minimally Invasive Sinus Floor Elevation: A Multicenter Clinical Observational Study With 12- to 65-Month Follow-Up.

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Abstract

The aim of this study is to evaluate the performance of implant-derived minimally invasive sinus floor elevation. A multicenter retrospective study was performed in 5 dental clinics. Patients requiring sinus augmentation for single implant placement were recorded and followed up. The dental implant used in this trial was a self-tapping endosseous dental implant that contains an internal channel to allow the introduction of liquids through the implant body into the maxillary sinus; those liquids include saline and a flowable bone grafting material. Overall, 37 implants were installed in 37 patients. The age range of the patients was 37-75 years (mean: 51.2 years). The average residual bone height prior to the procedure was 5.24 ± 1 mm. Of all cases, 25 implants replaced the maxillary first molar and 12 replaced the maxillary second premolar. All surgeries were uneventful with no apparent perforation of the sinus membrane. The mean follow-up time was 24.81 ± 13 months ranging from 12 to 65 months. All implants integrated and showed stable marginal bone level. No adverse events were recorded during the follow-up period. The presented method for transcrestal sinus floor elevation procedure can be accomplished using a specially designed dental implant. Further long-term studies are warranted to reaffirm the results of this study.