

ABSTRACT

A Comparative Study Between Graftless and Grafted Maxillary Sinus Lift Procedures for Implant Placement

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Introduction: Dental implant survival requires the presence of peri-implant bone for complete and stable osseointegration. Grafted sinus lift procedures are predictable methods to augment deficient ridges, but may give rise to complications, comorbidities, and additional costs. Recent evidence showed positive outcomes of the graft-less sinus lift technique. However, studies comparing the outcome of the grafted and graft-less sinus lift procedures are still lacking. This study aims to compare the implant stability, bone density, and pocket depth outcomes between grafted and graft less sinus lift procedures for implant placement. **Methods:** Ten patients underwent bilateral sinus lift procedures using a lateral window approach (i.e., grafted at one site, and graft less at the contralateral site). Assessments of implant stability, bone density, and pocket depth surrounding the implant were carried out at day 0, 3 months, 6 months, and 1 year post-surgery. **Results:** Results revealed an overall significant increase in implant stability ($p < 0.0001$) and bone density ($p < 0.0001$), and a reduction in pocket depth ($p < 0.0001$) one-year post-surgery. Implant stability and pocket depth assessment were similar between grafted and graft fewer groups ($p > 0.05$). Nevertheless, the grafted group displayed a higher increment of bone density at the buccal ($p < 0.0001$) and mesial ($p = 0.0068$) sites, but not at the distal ($p = 0.0068$) and palatal ($p = 0.3934$) sites, compared to the graft less group. **Conclusion:** These findings demonstrate comparable and promising outcomes for

healing, implant stability, and bone formation in the maxillary sinus with and without grafting or bone substitutes. Essentially, graft less sinus lift is a reliable alternative to the

grafted technique, with potentially reduced risk of complications and comorbidities, and cost-effective.