

Extrasinus Zygomatic Implants for the Immediate Rehabilitation of the Atrophic Maxilla: 1-Year Postloading Results From a Multicenter Prospective Cohort Study

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Purpose: The use of zygomatic implants is an alternative to major grafting procedures for the treatment of the atrophic posterior maxilla. However, only few studies reported solid and correct data about the use of extrasinus zygomatic implants. Starting from these considerations, this study aims to investigate the 1-year survival and success rates of extrasinus zygomatic implants immediately loaded in patients with severe atrophy of the posterior maxilla.

Methods: Twenty-three consecutive patients fully edentulous or with failing dentition in the upper arch and with a severe atrophy of the posterior maxilla were enrolled. All patients underwent prosthodontic rehabilitation with the application of implants in both anterior maxilla areas and zygomatic bone. All the zygomatic implants were inserted with an extrasinus path. Primary outcomes were prosthesis and implant failures. Secondary outcomes were complications, bleeding scores, probing pocket depths, and peri-implant marginal bone-level changes. A total of 98 implants were inserted.

Results: During the 1-year follow-up, no implant failure was reported as well as no pain and/or no sinusitis were detected. No other significant events were reported, except for minor soft tissue and technical problems. A maxillary sinus membrane rupture occurred during the surgical phase in 4 (17.4%) patients, but healing was not compromised. Peri-implant mucositis was observed in 2 (8.7%) patients. Twelve months after surgery, average bone loss around conventional implants was 1.11 ± 0.23 mm. In addition, no peri-implant radiolucency was observed around zygomatic implants. Within the limits of this study, preliminary short-term data (1-year after loading) suggested that extrasinus zygomatic implants represent a predictable treatment option for the atrophic maxilla. Further follow-up data (≥ 5 years) are needed to confirm these results.

Conclusions: The present study supports the conclusion that extrasinus zygomatic implants for the immediate rehabilitation of the atrophic maxilla have high success rate with minimal or no complications.

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