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ORIGINAL ARTICLE

Clinical and radiographic retrospective examination of data from patients who received endosseous zygomatic dental implants to support maxillary full-arch prostheses

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ABSTRACT

BACKGROUND: In recent decades, implant dentistry has evolved to become a highly predictable treatment modality in the rehabilitation of different types of edentulism. The present retrospective analysis aimed to report the middle-term outcome of severely atrophic jaws rehabilitated with extra-maxillary zygomatic implants placed in conjunction with standard implants.

METHODS: Thirty-one patients were included in the present study with 62 zygomatic implants and 90 standard implants positioned. Outcome measures were prosthetic success/survival, implant success/survival, complications, modified Plaque Index (mPLI), modified Bleeding Index (mBI), mucosal seal efficacy evaluation (MSEE) >4 mm, and zygomatic implants classification level (ZICL).

RESULTS: No implant and no prosthesis were lost; one patient had mucositis at one zygomatic implant; implant and prosthetic cumulative success rates at more than 3 years were respectively 98.4% and 87% using implant and patient as units of analysis. Mechanical and biological complications occurred in seven patients; all resolved. Eighty percent of the patients practiced proper hygiene and 77% of patients suffered absent or minor mucosal bleeding. Distribution of the variable "mucosal seal efficacy evaluation" led to 81% of sites with values less than 4, and 19% of sites with values higher than 4. In more than 80% of cases, so then, the zygomatic implants clinical level showed a level 1 at the end of the survey.

CONCLUSIONS: With 100% survival rates, zygomatic bilateral prosthetic configurations were an effective therapeutic option for individuals with highly reabsorbed maxillae undergoing initial full-arch fixed rehabilitation.

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KEY WORDS: Zygoma; Dental prosthesis; Immediate dental implant loading.

Conventional dental implants could typically not be inserted in patients with severely atrophic posterior maxillae unless the patient underwent bone reconstruction surgery; moreover, surgical augmentation techniques typically involved the use of bone substitute materials, which, once grafted, could raise patients' expenses and morbidities, and lengthen treatment times not always with predictable outcomes.[1, 2]

For patients with atrophic jaws who suffered some age-related co-morbidities, an alternate option to the bone augmentation techniques could