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Immediate full-arch fixed rehabilitation of a narrow mandible with newly conceived connection system implants: A case report

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Abstract

Rehabilitating thin jaws without reconstructive surgery entails using narrow implants. The proposed treatment adopted an innovative implant system, allowing the mini-screws to be parallel and immediately loaded. A mandible, wearing an overdenture, was functionalized contextually to the residual dental extraction and the placement of six 2.4-mm thick one-piece implants. Low-profile intermediate abutments, the LEMs, able to rotate over the spherical heads of the fixtures, were connected after suturing, oriented, and blocked in a mutual parallel position. The copings, engaging with a tapered juncture of the LEMs, resulted in their alignment to be intraorally wedged together. The provisional superstructure enclosed the copings and was immediately connected to the implants, and the definitive prosthesis was delivered after three months. No clinical signs of peri-implantitis or radiographically evident bone loss were recorded after a two-year follow-up without any prosthetic complication. No cases have been published regarding mini-implants bearing fixed prosthesis rehabilitaton.

Keywords: Alveolar bone loss; Case report; Dental implant; Dental prosthesis retention; Immediate dental implant loading; Metal-on-metal joint prostheses.

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Conflict of interest statement

The authors declare no conflicts of interest.

Figures

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

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Clin Implant Dent Relat Res. 2006;8(1):25-31. doi: 10.2310/j.6480.2005.00027.x.
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Int J Oral Maxillofac Implants. 2022 May-Jun;37(3):485-493. doi: 10.11607/jomi.9274.
PMID: 35727239

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References

1. Van Doorne L, Fonteyne E, Matthys C, Bronkhorst E, Meijer G, De Bruyn H. "Longitudinal oral health-related quality of life in maxillary mini dental implant overdentures after 3 years in function". Clin Oral Implants Res. 2021;32(1):23–36. doi: 10.1111/clr.13677. - DOI - PubMed
2. Worni A, Fehmer V, Zimmermann P, Sailer I. [Immediate loading of ø 2,4 mm narrow-diameter implants in the edentulous maxilla and mandible]. Swiss Dent J 2020;130(9):691-8. [German]. - PubMed
3. Yu W, Li X, Ma X, Xu X. Biomechanical analysis of inclined and cantilever design with different implant framework materials in mandibular complete-arch implant restorations. J Prosthet Dent 2022;127(5):783.e1-783.e10. 10.1016/j.prosdent.2022.02.018. - DOI - PubMed
4. Schiegnitz E, Al-Nawas B. Narrow-diameter implants: a systematic review and meta-analysis. Clin Oral Implants Res. 2018;29 Suppl 16:21–40. doi: 10.1111/clr.13272. - DOI - PubMed
5. Storelli S, Caputo A, Palandrani G, Peditto M, Del Fabbro M, Romeo E, et al. Use of narrow-diameter implants in completely edentulous patients as a prosthetic option: a systematic review of the literature. Biomed Res Int. 2021;2021:5571793. doi: 10.1155/2021/5571793. - DOI - PMC - PubMed

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