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Marginal bone level around conical connection tapered implants with platform switching: A multicenter retrospective study at 14 months follow-up

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ABSTRACT

The preservation of bone support is a fundamental condition for the long-term success of implant rehabilitations and the maintenance of osseointegration and stability in marginal bone level are crucial, too. Peri-implant marginal bone loss and the stability of the marginal bone crest are influenced by the surgical technique, the implant positioning, the tissue thickness, the presence of a micro-gap at the implant-abutment interface, and the implant design. Related to the last factor, the aim of the present retrospective study was to examine the effect of a newly designed conical tapered platform-switched implant on the marginal bone level over 14 months of follow-up. In order to do so, patients requiring an implant therapy were enrolled in three different centers and were rehabilitated with tapered dental implants, with internal conical implant-abutment connection and a built-in platform switching (MIS C1 Conical Connection, MIS, Israel). In cases where bone was missing around the implant's neck, a GBR procedure was performed using a xenograft bone substitute (OsteoBiol® *Gen-Os*®, Tecnoss®, Giaveno, Italy) and a collagen membrane (OsteoBiol® *Evolution*, Tecnoss®). After implant positioning, in order to evaluate the marginal bone level changes over time, the mesial and distal bone height was radiographically evaluated on the day of implant placement (baseline) and 14 months post-implantation. During the first year, marginal bone loss was 0.67±0.45mm, with no statistically significant differences between the different centers. After an average follow-up of 14 months, the survival rate was 100%.

CONCLUSIONS

As concluded by the Authors, *"within the limitations of the present retrospective study, a limited marginal bone loss and 100% implant survival rate were observed over 14-months of follow-up. The results showed high crestal bone stability around the conical tapered platform switched implants"*.

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