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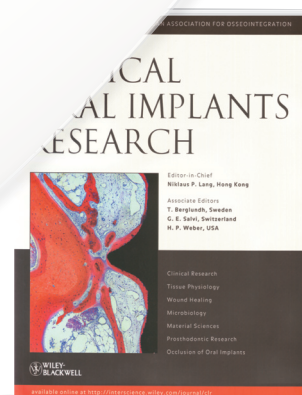
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A rough surface implant neck with microthreads reduces the amount of marginal bone loss: a prospective clinical study”*

Emanuel A. Bratu**, Moshik Tandlich**, Lior Shapira

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**Both authors contributed equally to this study.



¹Emanuel A. Bratu
²Moshik Tandlich
³Lior Shapira

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ABSTRACT.

Objectives

An intra-individual controlled clinical trial was conducted to evaluate and compare the amount of marginal bone loss (MBL) found around implants of a comparable design, with or without retention grooves (microthreads) or polished necks, during the early stages of healing.

Materials and methods

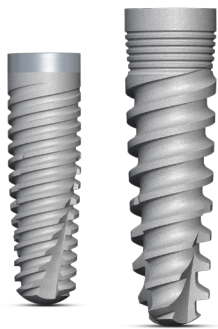
Forty-eight (48) patients with missing mandibular posterior teeth were treated with two commercially available implants of the same brand (MIS): one with microthreads (S-model) and the other with a polished neck (L-model). MBL around each implant was measured on follow-up radiograms taken 4 months after placement (exposure and crown cementation), and 6 and 12 months after loading.

Results

Forty-six (46) patients completed the study, making 46 implant pairs available for statistical analysis. None of the implants failed to integrate. All the implants displayed some extent of bone loss throughout the follow-up period. At each time point (exposure, 6 and 12 months after loading), the S-model implants displayed statistically significant lower amounts of bone loss (0.22 vs. 0.76, 0.57 vs. 1.22 and 0.9 vs. 1.5mm, respectively). Other than the type of the implant, no correlation was found between MBL and the implant stability values (PerioTest), dimensions, site of insertion or any of the other collected variables.

Conclusions

Implants with a roughened neck surface and microthreads are more resistant to MBL during the first phases of healing, as compared with implants with a polished neck.



The two evaluated implants. L-model (left) with a 1-mm polished neck and with no retention grooves, and S-model (right) implant with retention grooves (microthreads) and rough surface body and neck.

Authors' affiliations

¹Emanuel A. Bratu, University of Medicine And Pharmacy “Victor Babes” Timisoara School of Dentistry Department of Implant Supported Restoration Timisoara, Romania.

²Moshik Tandlich, ³Lior Shapira, Department of Periodontology, Hadassah Medical Center, Jerusalem, Israel