



Our Research is Your Success...

Published online in:
January
2014

CLINICAL ORAL IMPLANTS RESEARCH

”

Marginal Bone Loss Evaluation Around Immediate Non-Occlusal Microthreaded Implants Placed in Fresh Extraction Sockets in the Maxilla: A 3-Year Study”*

José L. Calvo-Guirado, Gerardo Gomez-Moreno,
Antonio Aguilar-Salvatierra, Javier Guardia,
Rafael A. Delgado-Ruiz, Georgios E. Romanos

* José L. Calvo-Guirado, Gerardo Gomez-Moreno, Antonio Aguilar-Salvatierra, Javier Guardia, Rafael A. Delgado-Ruiz, Georgios E. Romanos. Marginal bone loss evaluation around immediate non-occlusal microthreaded implants placed in fresh extraction sockets in the maxilla: a 3-year study. Clin. Oral Impl. Res. 00, 2014, 1–7.



¹ José L. Calvo-Guirado
² Gerardo Gomez-Moreno
² Antonio Aguilar-Salvatierra
² Javier Guardia
³ Rafael A. Delgado-Ruiz
⁴ Georgios E. Romanos

“Marginal Bone Loss Evaluation Around Immediate Non-Occlusal Microthreaded Implants Placed in Fresh Extraction Sockets in the Maxilla: A 3-Year Study”

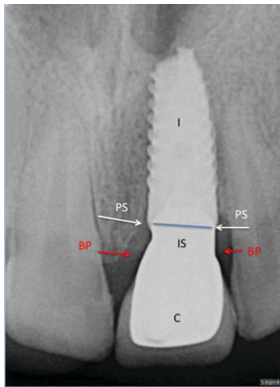


Fig.1 Digital periapical radiograph measurements after 3 years of follow-up: I, implant body; IS, implant shoulder; BP, bone peak; PS, platform switching; C, crown.



Fig.2 Esthetic clinical evaluation of soft tissue around the implant after 3 years of follow-up.

Authors' affiliations

¹ Department of Implant Dentistry, School of Medicine and Dentistry, University of Murcia, Murcia, Spain. Faculty of Medicine, University of Belgrade, Belgrade, Serbia.

² Department of Pharmacological Research in Dentistry, Dental School, University of Granada, Granada, Spain.

³ Department of Prosthodontics and Digital Technology, School of Dental Medicine, Stony Brook University, Stony Brook, NY, USA.

⁴ School of Dental Medicine, Stony Brook University, Stony Brook, NY, USA.

ABSTRACT.

Objective

To evaluate marginal bone loss over 3 years around immediate microthreaded implants placed in the maxillary anterior/esthetic zone and immediately restored with single crowns.

Material and methods

Seventy-one SEVEN® implants (with microthreads up to the platform – rough surface body and neck, internal connection and platform switching) were placed in fresh extraction sockets in the maxillary arches of 30 men and 23 women (mean age 37.85 ± 7.09 years, range 27–60). All subjects had at least 3mm of soft tissue to allow the establishment of adequate biologic width and to reduce bone resorption. Each patient received a provisional restoration immediately after implant placement with slight occlusal contact. Mesial and distal bone height was evaluated using digital radiography on the day following implant placement (baseline) and after 1, 2 and 3 years. Primary stability was measured with resonance frequency analysis.

Results

No implants failed, resulting in a cumulative survival rate of 100% after 3 years. Marginal bone loss from implant collar to bone crest measured at baseline (peri-implant bone defect at the fresh extraction socket) and after 3 years was $0.86\text{mm} \pm 0.29\text{mm}$. Mesial and distal site crestal bone loss ranged from $3.42\text{mm} \pm 1.2\text{mm}$ at baseline to $3.51\text{mm} \pm 1.5\text{mm}$ after 3 years ($P = 0.063$) and from $3.38\text{mm} \pm 0.9\text{mm}$ at baseline to $3.49\text{mm} \pm 0.9\text{mm}$ after 3 years, respectively ($P = 0.086$).

Conclusions

This prospective study found minimal marginal bone loss and a 100% implant survival rate over the 3-year follow-up for microthreaded immediate implants subjected to immediate non-occlusal loading.