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BASIC RESEARCH

Influence of the mucosa thickness on the preimplant bone behavior using Morse taper dental implants: A Prospective Clinical and Radiographic Study.

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Abstract

Objectives: This clinical study aimed to evaluate the behavior of peri-implant tissues around Morse taper implants installed in a subcrestal bone level position and the influence of mucosal thickness on the remodeling process.

Materials and Methods: Thirty patients were evaluated in that study, where mucosal thickness was recorded prior to surgery in the x-ray and intraoperatively in the sites corresponding to the implant location. Fifty-five Morse taper implants were installed 2 ± 0.2 mm of subcrestal bone level. Implants with different lengths and diameters were used in according to the need and indication of each case, determined during the pre-surgical planning phase. Then, X-rays were performed immediately and 3 months after implants placement and, were digitized and measured. The final restoration was installed 3 months after surgery. Statistical analysis to compare the clinical and radiological values of mucosal thickness (MT) and, MT versus bone remodeling of mesial bone level (MBL) and distal bone level (DBL) were performed. The data were compared using Student T-test ($p<0.05$).

Results: The mean of radiographic (2.2 ± 0.57 mm) and clinical (2.2 ± 0.72 mm) mucosal measurements showed no significant differences among the MT values (p=0.162). The statistics analysis demonstrated not significant differences in the MBL (1.1 ± 1.1 mm) and DBL (1.1 ± 1.3 mm) values (p=0.453).

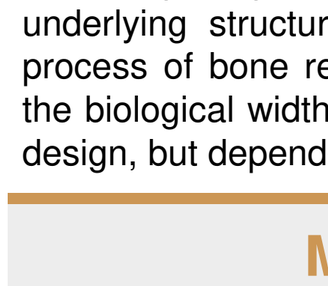
Conclusions: Within the limitations of this study, the findings suggest that when more mucosal thickness is present the MBL and DBL is less and, in the minor MT the MBL and DBL is bigger.

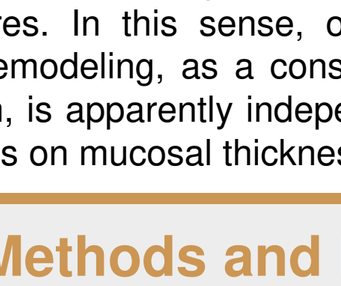
Background and Aim

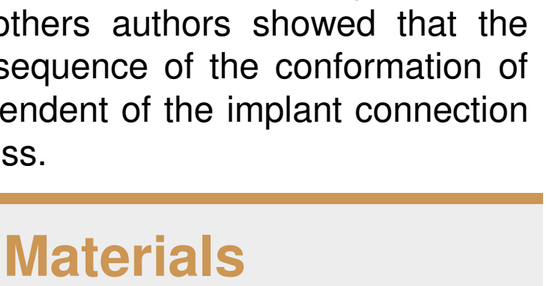
The surgical procedures in implantology implicate the management of a wound involving mucosal and bony structures. Related studies suggest that the perimplant mucosa requires a certain dimension to protect the underlying structures. In this sense, others authors showed that the process of bone remodeling, as a consequence of the conformation of the biological width, is apparently independent of the implant connection design, but depends on mucosal thickness.

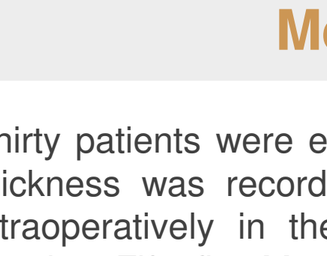
Methods and Materials

Thirty patients were evaluated in that study, where mucosal thickness was recorded prior to surgery in the x-ray and intraoperatively in the sites corresponding to the implant location. Fifty-five Morse taper implants were installed 2 ± 0.2 mm of subcrestal bone level. Implants with different lengths and diameters were used in according to the need and indication of each case, determined during the pre-surgical planning phase.









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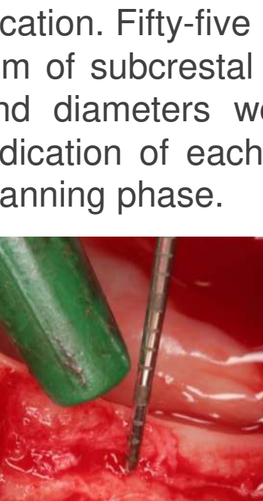

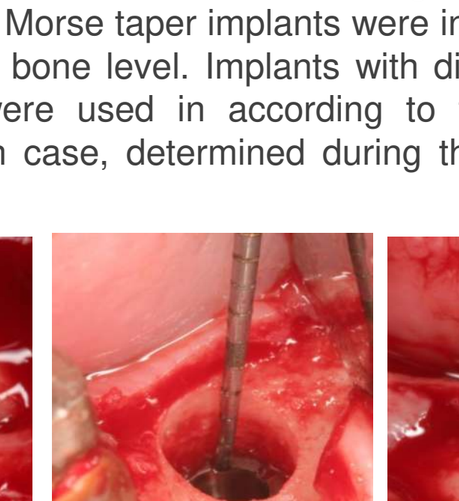

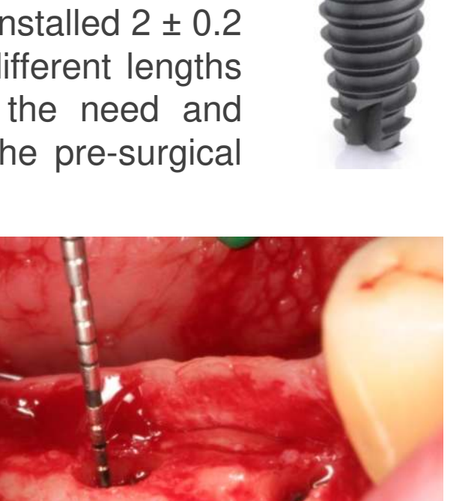

Results

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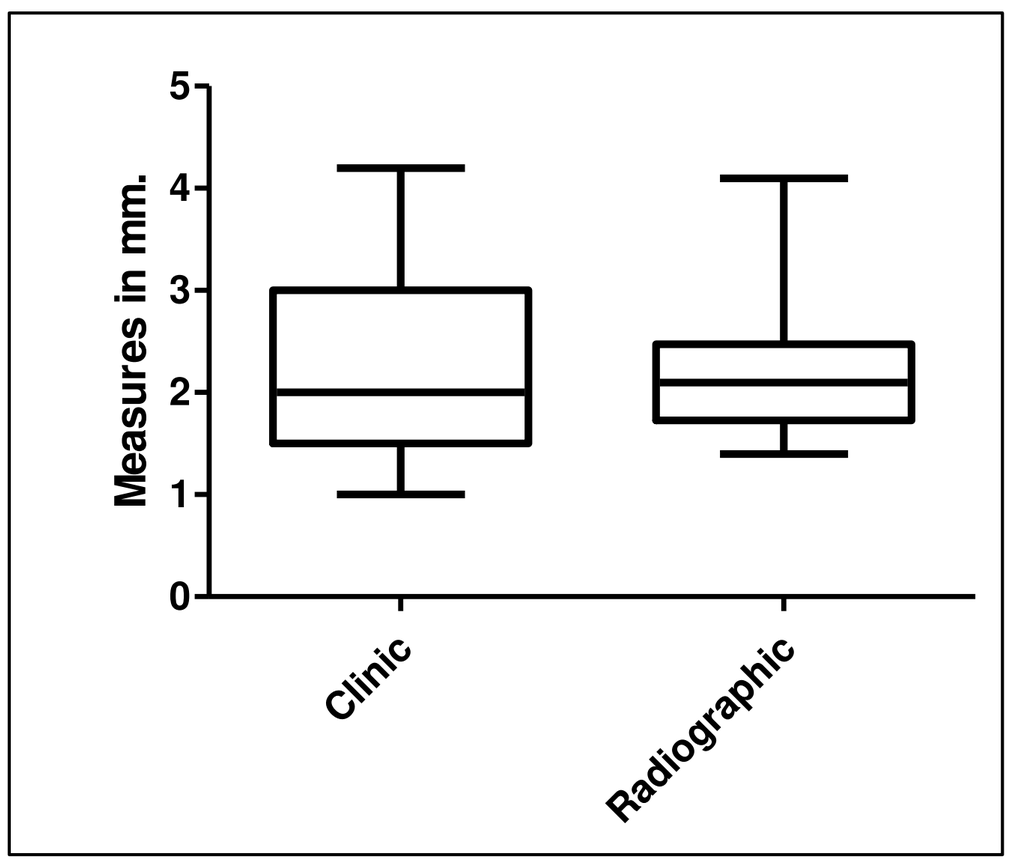

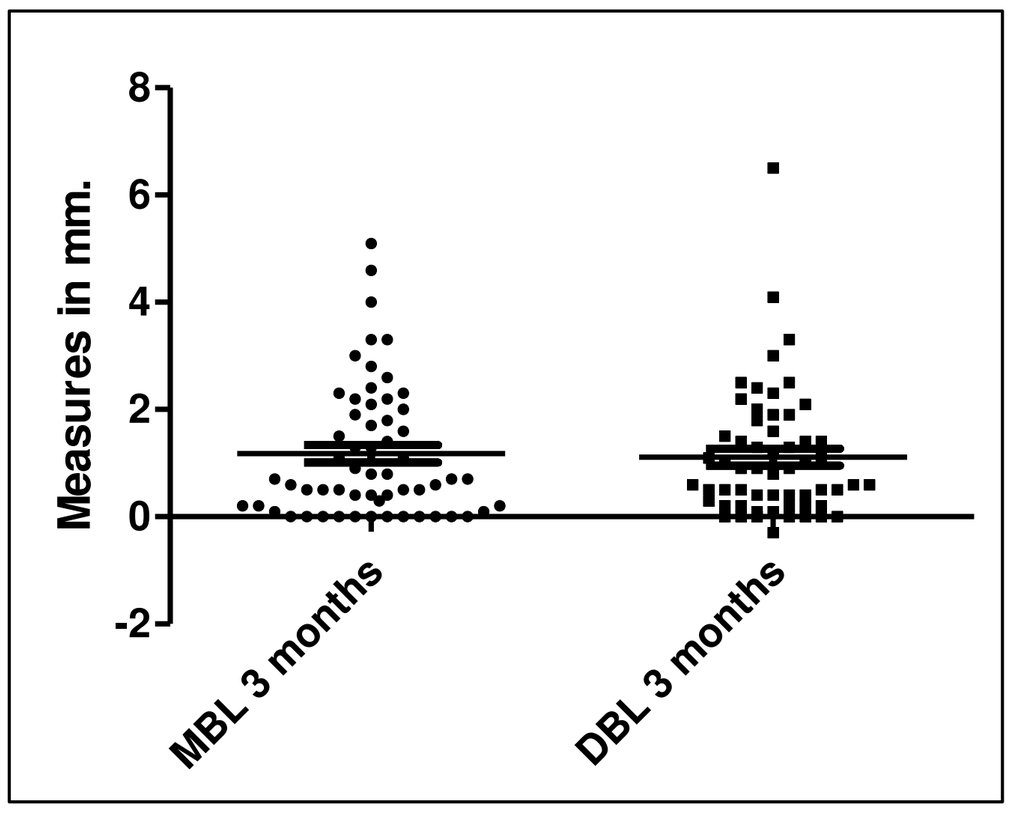

Conclusions

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References

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