

3.0

Evaluation of 3.0 mm narrow-diameter implants improved by reverse-tapered profile in human : a case report

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Object

The aim of the present case report was to investigate the clinical efficacy of 3.0 mm narrow-diameter implants with reverse-tapered profile.

Materials and Methods

A patient was selected among patients presenting to the Department of Periodontology of Chonbuk National University for missing area of mandibular anterior teeth. Implant fixture was Megagen ThinRidge™, Ø 3.0 x 10. Implant stability quotient (ISQ) values were initially measured at the time of implant installation and re-measured again after 12-week healing period. Cone beam CT analysis was performed at the same time.



Figure 1) Megagen ThinRidge™, Ø 3.0 x 10



Figure 2) Baseline. Planned implantation sites were #41, 32, 33.



Figure 3, 4, 5) 1st surgery. ISQ values were measured



Figure 6, 7, 8) 2nd surgery. ISQ values were re-measured after 12-week healing

Results

The baseline ISQ values increased as healing progressed. According to CBCT analysis, it was confirmed that all implant fixtures exhibited successful bone-implant contact without any signs of inflammation.

	Baseline (1st surgery)	12-week (2nd surgery)
#41 ISQ	64.0(64, 64)	65.0(63, 67)
#32 ISQ	68.0(69, 67)	70.5(71, 70)
#33 ISQ	34.5(32, 37)	70.0(70, 70)

Table 1) Measured ISQ values at baseline and 12 week.

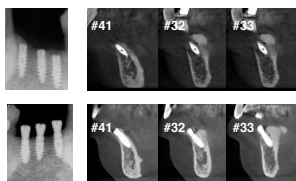


Figure 9-16) Radiographic examination. Periapical view and CBCT analysis. Upper figures were taken after 1st surgery and lower's were taken after 2nd surgery. CBCT views are #41, 32, 33 listed in the order.

Conclusions

Within the limitations of the present study, it can be concluded that 3.0mm narrow-diameter improved by reverse-tapered profile may have advantages in restoring narrow ridge without bone grafting.

References

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- 2.Meredith N, Alleyne D, Cawley P. Quantitative determination of the stability of the implant-tissue interface using resonance frequency analysis. Clin Oral Implants Res 1996;7:261-267.

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