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P27 Preliminary Results of the Survival of 5 x 6 mm Implants

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ABSTRACT

INTRODUCTION: Manufacturers of dental implants have introduced short implants for use in areas of vertical alveolar bone deficiency. The literature regarding the survival of short implants is mixed. Recent modifications in the geometric shape and surface treatments of short implants may contribute to a rate of survival comparable to their longer counterparts. The objective of this study was to determine the short term survival of a 5 x 6 mm plateau designed dental implant. **METHODS:** A retrospective cohort study design was used. The cohort consisted of patients who received one or more 5 x 6 mm plateau designed implant inserted between January 2005 and August 2006 at a private practice clinic. A chart review was conducted to acquire data on patient demographics, implant location, bone density, length of time in function and/or implant failure. The primary outcome variable was implant failure. Survival time was defined as the time between the date of implant placement and last appointment or the date of implant removal for any reason. Descriptive statistics are reported. **RESULTS:** The sample included 542 implants placed in 324 patients (52.8% female). Mean patient age was 56.6 + 13.1 years. All 5 x 6 mm plateau designed implants were placed using a two stage technique. 301 (56%) implants were placed in bone density three and 151 (28%) implants in bone density four. 226 (41%) were placed in the posterior maxilla and 265 (49%) in the posterior mandible. The average follow-up time the implants were in function was 13.3 + 8.4 months, range 0.1 to 30.4 months. 35 failures were recorded for a survival rate of 92.1%. 20 (57%) of the failed implants were placed in type three bone density and 13 (37%) in type four density bone. 17 (49%) of the failures were in the posterior maxilla and 11 (31%) in the posterior mandible. **CONCLUSION:** The short term survival of the 5 x 6 mm plateau designed implant is encouraging. Additional observation time is necessary to establish long term survival rates.

INTRODUCTION

The advantages of using short implants in areas of vertical alveolar bone deficiency include:

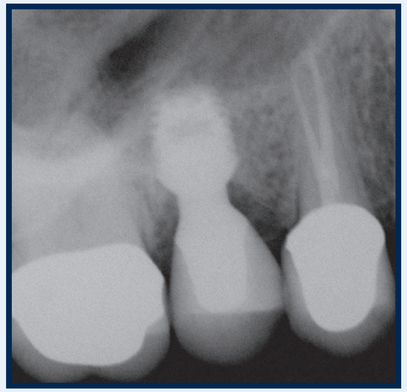
1. *A reduced need for grafting*
2. *Elimination of complications associated with grafting*
3. *Reduced treatment time*
4. *Reduced cost*
5. *Increased patient acceptance for implant treatment*

The survival of short implants in clinical studies has been mixed. The variability in the survival rate of these studies may be influenced by the design of the implant and its clinical application. The objective of this study was to determine the short term survival of 5 x 6 mm plateau designed single tooth dental implants.

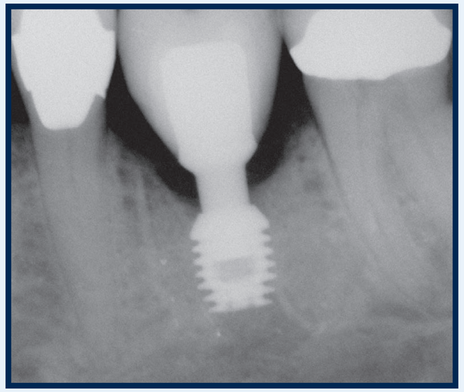
METHODS

A retrospective case series study design was used. The study consisted of patients who received one or more 5 x 6 mm plateau designed implant inserted between January 2005 and August 2006 at a private practice clinic. A chart review was conducted to acquire data on patient demographics, implant location, bone density, length of time in function and/or implant failure. The primary outcome variable was implant failure. Survival time was defined as the time between the date of implant placement and last appointment or the date of implant removal for any reason. Descriptive statistics are reported.

5.0 mm x 6.0 mm Bicon Implant.



A 5.0 mm x 6.0 mm short implant supporting a Bicon Integrated Abutment Crown™ for a maxillary right second premolar. Note level of maxillary sinus.



A 5.0mm x 6.0mm short implant supporting an Integrated Abutment Crown™ for a mandibular left first molar.

RESULTS

IMPLANTS	PATIENTS	TIME IN FUNCTION	FAILURES	SURVIVAL RATE
542	324	13.3 + 8.4 mos	35	92.1%

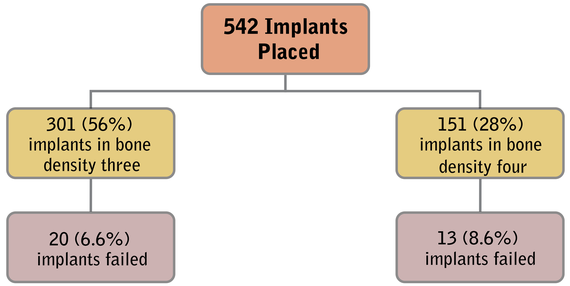


Figure 1. Implant failures in bone density three and four.

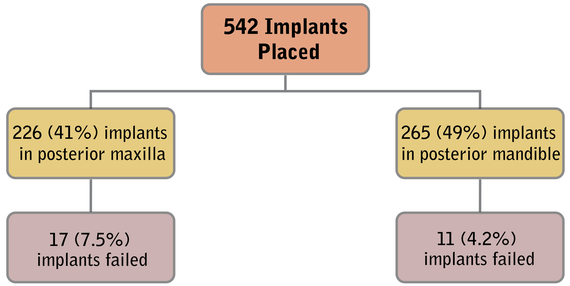


Figure 2. Implant failures in posterior maxilla and posterior mandible.

CONCLUSION

The short term survival of the 5 x 6 mm plateau designed implant is encouraging. Additional observation time is necessary to establish long term survival rates.