



A Retrospective Evaluation of 1,387 Single-Tooth Implants: A 6-Year Follow-Up

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Abstract

Background: The aim of this study was to evaluate the overall survival rate and factors that affect the clinical outcome of 1,387 consecutively placed implant-supported single restorations up to 6 years.

Methods: During 6 years (1999 to 2005), 1,387 implants were placed in 1,215 subjects (1,073 males and 142 females) who required single-tooth replacements. The average time from implant placement was 2.7 ± 3.27 years. Implants were mostly placed in the maxillary premolar area (39.5%) followed by the anterior maxillary area (28.7%). Implant survival and location, need for bone augmentation, and implant dimensions were recorded and analyzed.

Results: Failed implants totaled 96, resulting in an overall survival rate of 93.1%. The vast majority of failures (94.8%) occurred during the first year following implant placement. Bone augmentation was performed in 9.7% of the implants with a 92.5% survival rate, similar to the survival rate of non-augmented areas (93.1%; $P = 0.79$). The average implant length was 13.3 mm, ranging from 8 to 16 mm. Longer implants (≥ 11

mm) showed similar survival rates as implants <11 mm (93.2% versus 90.2%, respectively; $P = 0.4$). Implant width ranged between 3.25 to 5 mm (mean 3.9), with no effect on implant survival ($P = 0.43$). There was a significant difference in implant survival according to the anatomic zone of implant placement ($P = 0.0075$). The maxillary premolar area showed the highest survival rate (96.2%).

Conclusion: Implant-supported single-tooth replacement is a predictable procedure with good survival rates up to 6 years.