

Library : Bibliography

Prospective Clinical Evaluation of 835 Multithreaded Tapered Screw-Vent Implants: Results After Two Years of Functional Loading

Abstract:

Multithreaded tapered screw implants have been used for several years, but lack of clinical documentation about marginal bone stability and survival rates have raised concerns about the design among some clinicians. This study prospectively evaluated the survival rates, success rates, and marginal bone stability of multithreaded tapered screw implants. A total of 835 implants in diameters of 3.7 mm (9%), 4.7 mm (76%), and 6.0 mm (15%) were placed in 328 patients using a single-stage, delayed-loading protocol. The implants were restored with a variety of prostheses and monitored over 2 years of functional loading. Five implants failed and were removed before loading. Cumulative implant survival was 99.4% (n = 835); differences between mandibular (99.0%, n = 408) and maxillary (99.8%, n = 427) implants were not statistically significant ($P > .20$). Mean marginal bone resorption was 1.66 mm (± 0.13 mm). Six implants failed to meet the success criteria by sustaining mesial and distal bone loss below the first implant thread; however, they remained stable and continued functioning without pain or inflammation. Cumulative implant success was 98.6% (n = 835); differences between maxillary (98.6%) and mandibular (98.8%) implants were not statistically significant ($P > .20$). Success rates by implant diameter were 98.6% (3.7 mm), 98.4% (4.7 mm), and 100% (6 mm). After 2 years of functional loading, survival and success rates for multithreaded tapered implants placed in a nonsubmerged protocol equaled or surpassed those of single-thread, straight-walled implant historical controls.