



RESEARCH

Survival and Success Rates of Immediately and Early Loaded Implants: 12-Month Results From a Multicentric Randomized Clinical Study

Tommaso Grandi, MD*
Giovanna Garuti, MD
Paolo Guazzi, MD
Luciano Tarabini, MD
Andrea Forabosco

Our objective was to compare survival and peri-implant bone levels of immediately nonocclusally vs early loaded implants in partially edentulous patients up to 12 months after implant placement. Eighty patients (inclusion criteria: general good health, good oral hygiene, 30–65 years old; exclusion criteria: head and neck irradiation/cancer, pregnancy, uncontrolled diabetes, substance abuse, bruxism, lack of opposing occluding dentition, smokers >10 cigarettes/day, need for bone augmentation procedures) were selected in 5 Italian study centers and randomized into 2 groups: 40 patients in the immediately loaded group (minimal insertion torque 30 Ncm) and 40 patients in the early loaded group. Immediately loaded implants were provided with nonoccluding temporary restorations. Final restorations were provided 2 months later. Early loaded implants were provided with a definitive restoration after 2 months. Peri-implant bone resorption was evaluated radiographically with software (ImageJ 1.42). No dropout occurred. Both groups gradually lost peri-implant bone. After 12 months, patients of both groups lost an average of 0.4 mm of peri-implant bone. There were no statistically significant differences (evaluated with *t* test) between the 2 loading strategies for peri-implant bone level changes at 2 ($P = .6730$), 6 ($P = .6613$) and 12 ($P = .5957$) months or for survival rates (100% in both groups). If adequate primary stability is achieved, immediate loading of dental implants can provide similar success rates, survival rates, and peri-implant bone resorption as compared with early loading, as evaluated in the present study.