Immediate Occlusal Loading of Implants Placed in Fresh Sockets After Tooth Extraction

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Purpose: The aim of this study was to evaluate the clinical and radiographic outcome of dental implants immediately placed and loaded into fresh extraction sockets after 18 months. Materials and Methods: Twenty-seven patients, 15 women and 12 men, received a total of 160 implants; 150 were placed immediately after extraction. The sockets in the study had fully preserved walls, and 10 were placed in healed sites. Immediately after surgical procedure, all patients received the temporary prosthetic reconstruction in occlusion. Five months postsurgery, definitive metal-ceramic restorations were cemented on abutments. Follow-up visits were performed for the assessment of clinical parameters. Intraoral digital radiographic examinations were performed 3 and 18 months after implant placement. Results: Minor swelling of the gingival mucosa was observed, but no mucositis or flap dehiscence with suppuration were found. Mean marginal bone loss 1 year 18 months after immediate loading was 0.65 ± 0.58 mm to the mesial side and 0.84 ± 0.69 mm to the distal side in the maxilla and 1.13 ± 0.51 mm mesially and 1.24 ± 0.60 mm distally in the mandible. There was no difference between splinted and nonsplinted implants with respect to marginal bone loss. Discussion and Conclusion: Within the limits of this clinical study, the results indicate that immediate loading of implants placed in immediate extraction sites can be carried out successfully. (Case Series) Int J ORAL MAXILLOFAC IMPLANTS 2007;22:955–962

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The placement of implants in fresh extraction sockets1–4 allows placement of the implant during the same visit at which the tooth is extracted, which reduces morbidity, decreases the treatment time, and preserves bone in the residual alveolar ridge.5 Furthermore, placement of an implant immediately after tooth extraction may help maintain the bone crest and lead to ideal implant positioning from a prosthetic point of view.6 The internal and external dimensions of extraction sockets and thus the dimensions of the residual alveolar ridge change if sockets are left without treatment7,8; if uncontrolled, this resorption will lead to bone deficiencies that sometimes may contraindicate the placement of dental implants.9 Lekovic et al10 and lasella et al11 showed that about 45% of the residual alveolar ridge may be resorbed after tooth extraction and that the majority of this resorption takes place in the first 6 months after extraction.

An abundance of evidence supports the immediate loading of implants with high success rates, which shortens the treatment time. Becker et al12 found a total success rate of 93.3% with immediately placed implants; similarly, Rosenquist and Grenthe13 obtained an average survival rate of 93%. Watzek et al14 achieved a cumulative survival rate of 92.4% for maxillae and 94.7% for mandibles after 3 years of loading. However, few studies have been published

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