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Immediate Restoration of Delayed Placement of Dental Implants in Patients with Treated Periodontal Disease: 1-Year Results”*

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ABSTRACT.

Purpose

To evaluate implant and patient characteristics in a prospective clinical study involving immediate fixed restoration of delayed placement of dental implants.

Materials and methods

Patients diagnosed with generalized chronic periodontitis and previously treated were accepted into the study when they expressed a wish to receive immediate restoration of dental implants. Treatment planning and implant placement were computer assisted, using computerized tomography, planning software, and a surgical template. Patients received abutments and cemented provisional prostheses no later than 72 hours following implant surgery. Patients were followed at 2 and 4 weeks, and 3, 6, and 12 months.

Results

Eighteen patients were accepted and completed the study, ages ranged from 34 to 69 years (mean 54.5 ± 8.5 years). Five patients (27.8%) were smokers (2.5 to 60 pack years). Fifty implants were placed, ranging between 1 to 8 implants per patient. Median implant length was 13 mm (range, 10 to 13 mm) and median implant diameter was 3.75 mm (range, 3.75 to 5 mm). Mean insertion torque was $43 \text{ NCm} \pm 6.2 \text{ SD}$ (range 30 to 50 NCm). Mean implant stability quotient was 71 ± 11 (range 37 to 85). One implant in a patient who smoked and three implants in another patient who smoked failed for a total of four failed implants. At 12 months, the overall survival rate was 92% (100% and 73% among nonsmokers and smokers, respectively).

Conclusion

The survival of immediately restored dental implants in periodontally treated patients is greater than 90%. Smokers with a past history of chronic periodontitis seem to have a lower implant survival rate.

Distribution of Implants Between Patients.

No. of implants per patient	No. of patients	Single unit restoration	Multiple unit restoration	Total
1	2	2	0	2
2	8	0	16	16
3	5	0	15	15
4	1	2	2	4
5	1	0	5	5
8	1	1	7	8
Total	18	5	45	50

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