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Clinical and Patient-Related Outcomes of a Tapered Implant System with Switched Platform Conical Abutments: A Private Practice Field Trial

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Summary

The aim of this prospective cohort observational field trial was to examine 1-year survival and success rates of a recently introduced tapered implant system (C1 Implants) with switched platform conical abutments and to evaluate patient related outcomes of therapy.

Partially edentulous patients aged between 18 and 75 years, with available bone height for dental implants ≥10 mm desiring to restore the missing tooth/teeth with implant supported restoration, were recruited by 7 periodontists in their respective private practices. Dental implants were installed according to standard implant therapy protocol. Three to 6 months postoperatively, after evaluating interim implant success, implants were restored by the referring dentists. Patient, Ramfjord teeth, and implant data, including baseline and 1-year postoperative, were collected.

A total of 60 patients were recruited and received 117 implants. Complete 1-year clinical and radiographic data were available for 83 and 65 implants, respectively. Two implants failed during the first year, resulting in a 1-year survival rate of 98.3%. Mean implant probing pocket depth was 2.29 ± 0.84 mm. Mean radiographic bone distance from implant's shoulder at the mesial and distal sites at 1 year was 0.66 ± 0.5 and 0.79 ± 0.64mm, respectively, resulting in a success rate of 95.4%. The 1-year mean bone level change was 0.52 ± 0.45 and 0.54 ± 0.55 mm for mesial and distal sites, respectively (Table 3).

Patient subjective evaluation of therapy exhibited a median pain experience of 1 and median esthetics, function, and general satisfaction evaluation of 10 on a scale of 1 to 10.

The tapered conical connection dental implant system, used in private dental practices, shows good 1-year survival and success rates that are similar to other implant systems on the market.

Table 3.

Implant data at 1 year*				
Clinical Parameter	Mean	SD	Median	Significance
PII †	0.45	± 0.47	0.33	
GI †	0.41	± 0.44	0.33	
PPD †	2.29	± 0.84	2.33	
PPD max †	3.07	± 1.03	3.00	
Mesial bone level T0, mm ‡	0.16	± 0.32	0.0	< .001
Mesial bone level T12, mm ‡	0.66	± 0.5	0.65	
Δbone M, mm ‡	0.52	± 0.45	0.48	
Distal bone level T0, mm ‡	0.31	± 0.48	0.0	< .001
Distal bone level T12, mm ‡	0.79	± 0.64	0.68	
Δbone D, mm	0.54	± 0.55	0.55	

*Wilcoxon signed rank test, p=.05. PII indicates plaque index; GI, gingival index; PPD, probing pocket depth.
† Number of implants = 83.
‡ Number of implants = 65.

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