



Survival rate of 469 implants of two different diameter-reduced implant-systems over a 7.75 years period

V. E. Karapetian, M. Roels, J. Neugebauer, J. E. Zöller

Interdisciplinary Outpatient Department for Oral Surgery and Implantology / University of Cologne

Abstract

Implants with small-diameters may be used where bone width is reduced but sufficient vertical bone height is available, or in single-tooth gaps with limited mesio-distal space, such as for the replacement of frontal and lateral maxillary or mandible incisors. The purpose of this study was to compare the prognosis of narrow implants (2,8-3.8mm-diameter) of two different implant-systems (XIVE® and templant®).

Background and Aim

The purpose of this study was to compare the prognosis of narrow implants (2,8-3.8 mm-diameter) to standard (> 3,8 mm diameter) implants.

Methods and Materials

Over 93 month period, 469 narrow implants were inserted in 108 patients to support partial fixed prostheses and single-tooth crowns. Clinical and radiographic assessment data were provided. The total number of 355 XIVE-implants® were followed-up. 114 templant-implants® were checked to find the survival rate. Cumulative survival and success rates were calculated with life-table analyses processed by collecting clinical and radiographic data.

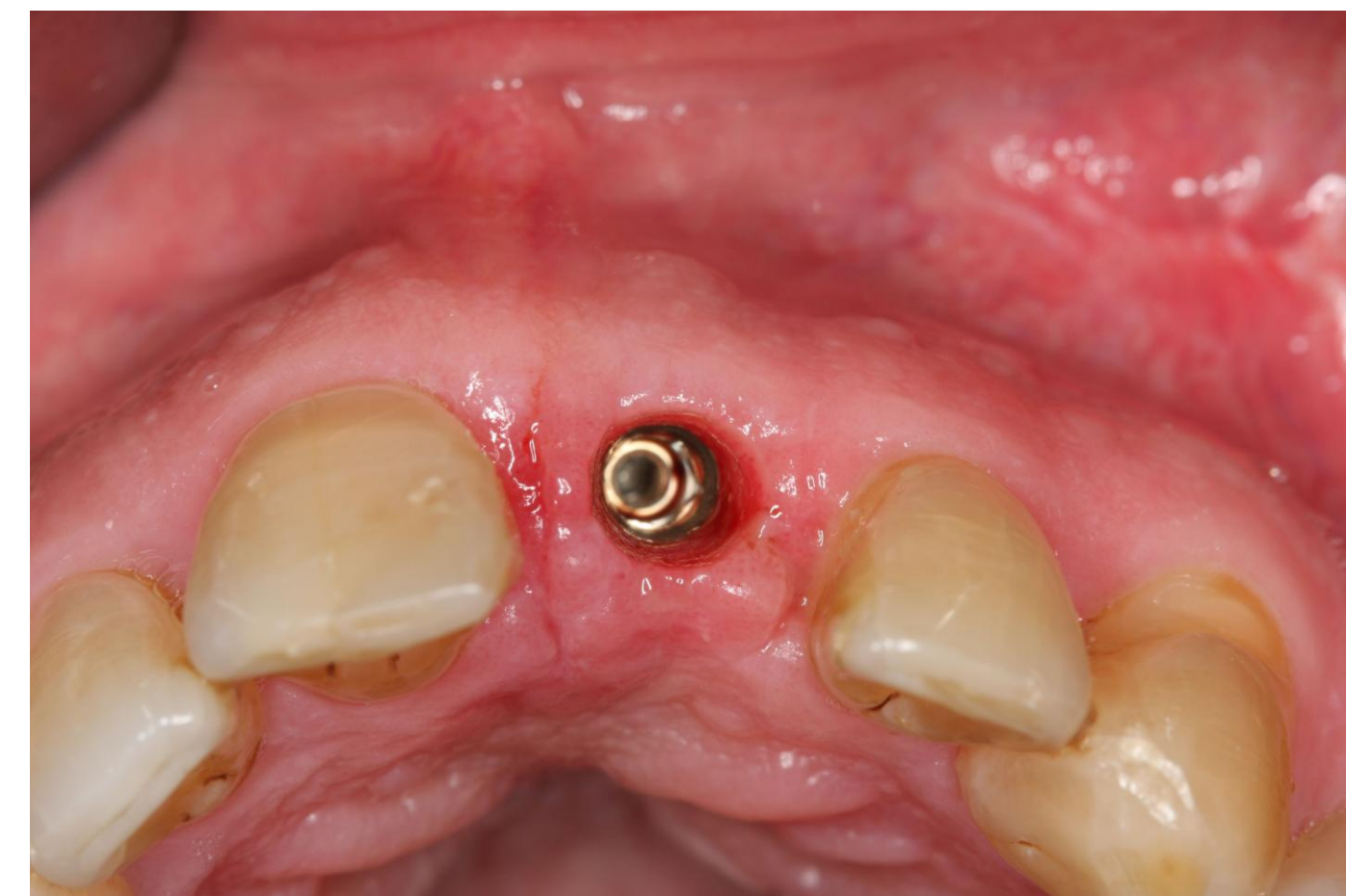


Fig. 1: Reopening of the implant regio 21



Fig. 2: Abutment on the implant regio 21

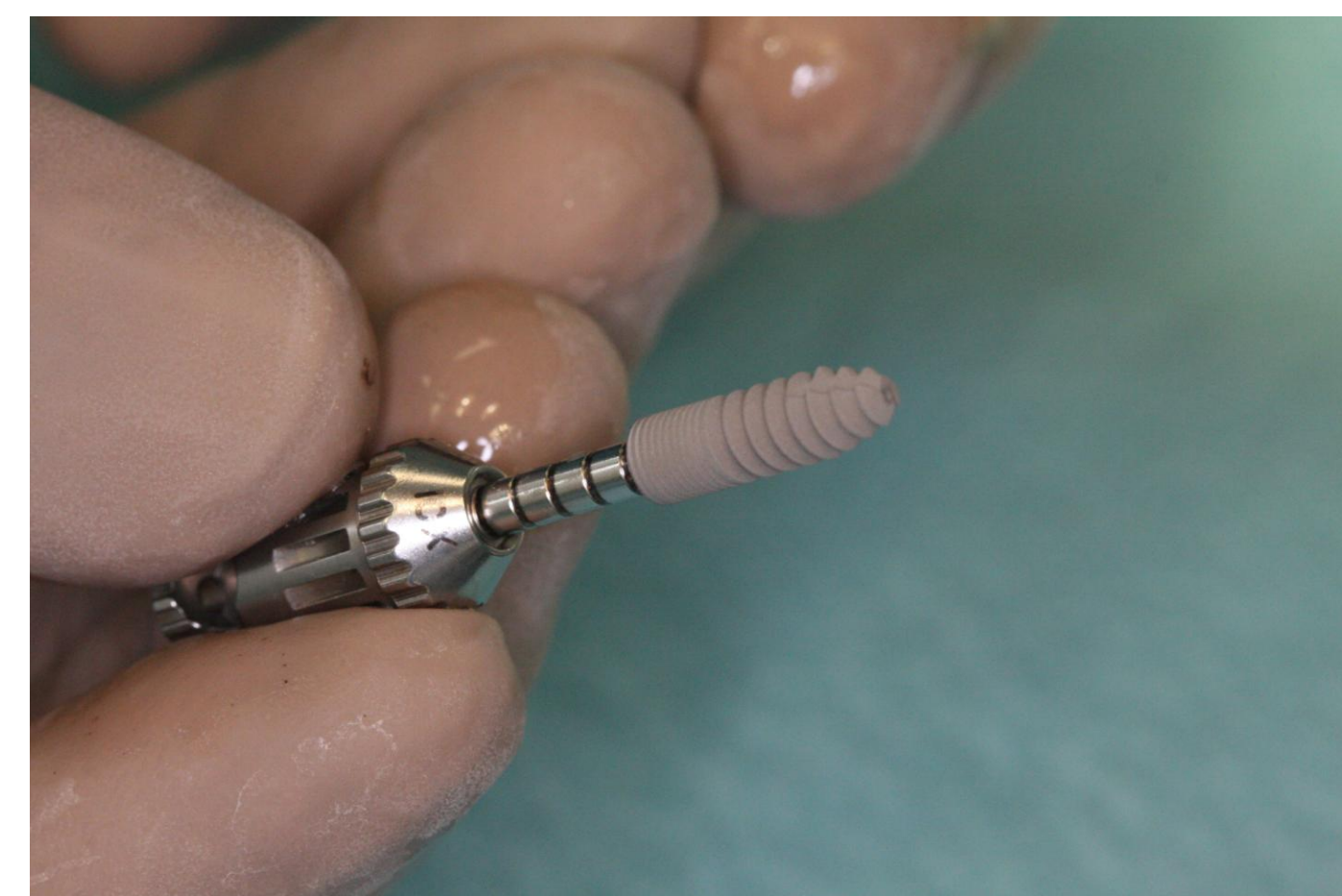


Fig. 3: ICX-templant® implant



Fig. 4: Final situation with Cerec®-crown

Results

5 of 355 XIVE-implants® (1,4 %) failed. 2 of 114 templant-implants® (1.8%) faile (table 1+2). Cumulative survival and success rates were calculated with life-table analyses processed by collecting clinical and radiographic data. For XIVE-implants®, the cumulative survival rate was 98.6 %. For templant-implants® a cumulative survival rate of 98.2% was found. Cumulative survival and success rates of the two examined small-diameter implant-systems were not statistically significant different (P > 0.05).

Templant® (n = 114)	N=114	%
in situ	112	98,2
explanted	2	1,8
Reasons for implant losses		
Loosening	2	1,8

XiVE® (n = 355)	n=355	%
In situ	350	98,6
Explanted	5	1,4
Reasons for implant losses		
Loosening	3	0,8
Periimplantitis	2	0,6

Conclusions

We suggest from these results, that there seems to be no difference between narrow and standard diameter implants regarding the osseointegration. An important advantage seems to be, that by using a small-diameter implant on patients with reduced bone width, dental practitioner can forgo a lateral augmentation.

References

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Viktor E. Karapetian
University Hospital of Cologne
Interdisciplinary Outpatient Department for Oral Surgery and Implantology
Kerpener Strasse 62 - D50931 Cologne / Germany
Phone: +49 221 478 5771
E-Mail: vek.za@uni-koeln.de