Clinical performance of screw-retained and cemented implant-supported zirconia single crowns: 36-month results.

The objective of this clinical study was to evaluate the clinical performance of implant-supported zirconia crowns with a sintered veneering cap. Furthermore, the influence of the type of retention (screw-retained vs cemented single crowns) was analysed. Fifty-eight patients were accommodated with 114 implants, inserted in the molar and premolar regions. Zirconia-based crowns with a sintered veneering cap were either screw-retained (n = 53) or cemented (n = 61) on the implant. Recalls were performed every 6 months. The state of soft tissue was documented by the modified plaque and gingiva index (mPI) and sulcus bleeding index (mSBI). The restorations were evaluated for technical failures like veneering porcelain fractures, surface qualities and marginal fitting. Neither implant loss nor crown fractures occurred. After a mean clinical service time of 36.9 months, fractures of the veneering porcelain were registered in 1.8 % of the cases. The Kaplan-Meier survival probability regarding eventless restorations was 98.2 %. Chipping of the veneering porcelain was registered in two cemented crowns without statistical influence of the type of retention. The indices showed healthy soft periimplant tissues in both groups. Implant-supported zirconia crowns with a sintered veneering cap demonstrated good clinical performance. The type of retention
had no influence on technical complications.