SEM images (Fig 1) showed rough surfaces with deep grooves after grinding that were progressively smoothened by polishing.

Discussion

The hypothesis of unequal effectiveness of different polishing kits has to be widely rejected. Except for one system, the final surface roughness of all kinds of polishing systems was lower than 0.2 to 0.3 µm (R_a)/ 1.8 µm (R_z), which is similar to or even less than reported for glaze.[3,5] As differences in roughness were high after the first polishing but could be reduced to similar values after final polishing, a sequential application of all polishers in two- or three-step systems seems to be essential for an effective smoothening. Highly smooth zirconia surfaces gain importance with the application of full-contour zirconia restorations, as low-surface roughness was shown to cause even less antagonistic enamel wear than conventional veneering ceramics.[1,3] Good polishing performance of zirconia may be based on its homogenous and fine microstructure, which could be visualized in the SEM images. Damage caused by occlusal adjustment of contact points (eg, grinding grooves) might further serve as the origin of cracking or catastrophic failure.[2] Therefore, accurate polishing with appropriate polishing kits for zirconia seems to be important for clinical long-term success.

Conclusions

The majority of technical and intraoral sets were effective in reducing surface roughness of zirconia. Both two-step and three-step systems showed good results after passing all polishing steps and may be recommended for reglazing of ground surfaces.

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Literature Abstract

Factors affecting peri-implant bone loss: A post-five-year retrospective study

This article studied the factors that may influence peri-implant bone loss. A total of 148 patients with 585 implants rehabilitation over a follow-up period of 5 years were longitudinally studied. Radiographic bone loss around implant was studied. Various potential bone loss factors such as oral hygiene, implant size, and prosthesis design also were considered. The results showed the effect of the implant platform to the prosthesis horizontal component (> 3.3 mm and < 6 mm) has the largest influence on peri-implant bone loss. More bone loss was observed when the aforementioned distance was below 3.3 mm, while the distance larger than 6 mm has no effect on the level of bone loss. However, this paper did not clearly define the phrase "prosthesis horizontal component."

Alvarez RV, Sayans MP, Diz PG, Garcia AG. *Clin Oral Implants Res* 2014 Jun 30. **doi:** 10.1111/clr.12416 [epub ahead of print]. **References:** 70. **Reprints:** Mario Perez Sayans. Entrerrios s/n, Santiago de Compostela, C.P. 15782, Spain—*Ansgar C.* Cheng, Singapore