

SCIENTIFIC REPORT

Grandio – 2 year clinical study

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A clinical comparative study of Grandio and Filtek Silorane was conducted at the University of Mainz. ^[1] The two-year results of this permit a comparison of the clinical behaviour of Grandio, the nano-hybrid composite, to Filtek Silorane, the siloran system

In this study, 102 in total Class II cavities in the split-mouth design in 37 patients were treated with either Grandio (VOCO) or Filtek Silorane (3M ESPE). Futurabond NR (VOCO) was used as the bonding material in the Grandio cases and the cavities that were being treated with Filtek Silorane were pre-treated with the Silorane system adhesive (3M ESPE). An evaluation of the fillings was carried out two years after placement according to the criteria by Hickel et al.^[2] The evaluation scale contained five groups: 1 = Excellent, 2 = Good, 3 = Acceptable, 4 = Unsatisfactory, 5 = Poor. Whether enamel cracks had occurred was additionally checked. 94% of the Grandio restorations and 92% of the Silorane restorations could be examined in the follow-up

Results

The results of the individual rating criteria are displayed in Figure 1. Secondary caries was not observed in any of the Grandio restorations after two years, while caries was diagnosed on the cavity margin of one of the Filtek Silorane fillings. The enamel crack index was 0.07 for Grandio and 0.06 for Filtek Silorane.

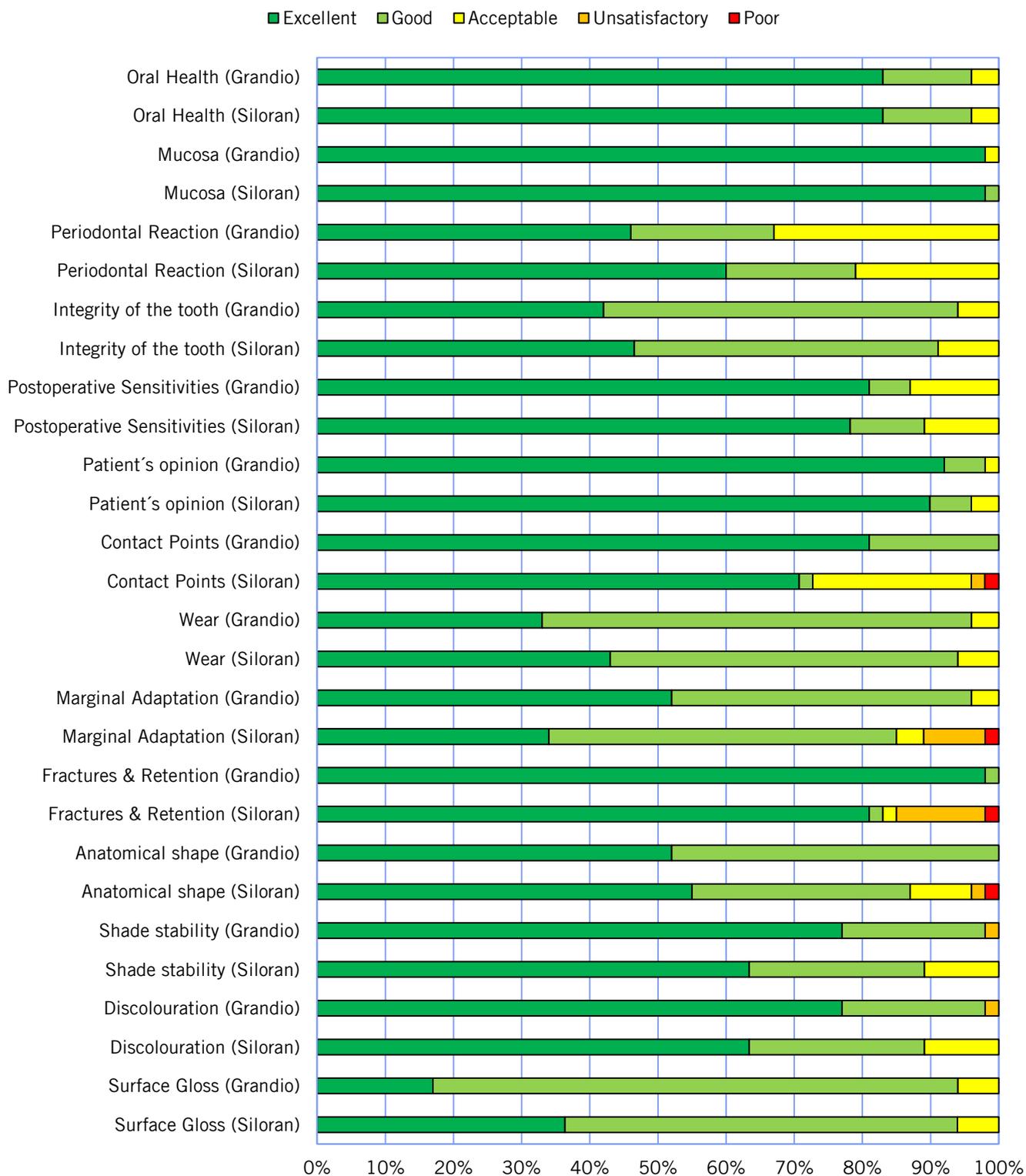


Figure 1: 2-year results of the clinical study

Conclusion: Grandio exhibited excellent values in this study and is especially superior to the likewise examined Filtek Silorane in the categories contact points, marginal adaption, fractures & retention as well as anatomical shape.

[1] A. Schattenberg, S. Storck, I. Busemann, B. Willershausen, C.-P. Ernst, *IADR Barcelona 2010*, Poster #2999.

[2] R. Hickel, J.F. Roulet, S. Bayne, S.D. Heintze, I.A. Mjör, M. Peters, V. Rousson, R. Randall, G. Schmalz, M. Tyas, G. Vanherle, *Clin. Oral Investig.* **2007**, *11*, 5-33.