# 1-Two-year clinical evaluation of ormocer, nanohybrid and nanofill composite restorative systems in posterior teeth

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Abstract

Purpose: To evaluate and compare the 2-year clinical performance of an ormocer, a nanohybrid, and a nanofill resin composite with that of a microhybrid composite in restorations of small occlusal cavities made in posterior teeth.

Materials and Methods: Thirty-five patients, each with 4 occlusal restorations under occlusion, were enrolled in this study. A total of 140 restorations was placed, 25% for each material: an ormocer-based composite, Admira; a nanohybrid resin composite, Tetric EvoCeram; a nanofill resin composite, Filtelk Supreme; and a microhybrid resin composite, Tetric Ceram. Two operators placed all restorations according to the manufacturers' instructions. One week after placement, the restorations were finished/polished and patients were advised to return for follow-up at 6 months, 1 year, and 2 years. All patients attended the 2-year visit where the clinical performance of all restorations was evaluated. Two independent examiners made all evaluations accordingto the USPHS modified Ryge criteria immediately after placement of restorations and at subsequent recall visits. The changes in the USPHS parameters during the 2-year period were analyzed with the Friedman test. Comparison of the baseline scores with those at the recall visits was made using the Wilcoxon signed rank test. The level of significance was set at $p < 0.05$.

Results: All materials showed only minorchanges, and no differences were detected between their performance at baseline and after 2 years. Only one ormocer and one microhybrid composite restoration had failed after 2 years. No failure was detected in nanohybrid and nanofill composite restorations. Regarding the clinical performance, there were no statistically significant differences among the materials used ($p > 0.05$).

Conclusion: After 2 years, the ormocer, nanohybrid, and nanofill composites showed acceptable clinical performance similar to that of the microhybrid resin composite.

**Author Keywords:**
ormocer; nanofill composite; nanohybrid composite; clinical evaluation

**KeyWords Plus**: DENTAL COMPOSITES; MARGINAL INTEGRITY; RESIN COMPOSITE; WEAR; PERFORMANCE; CAVITIES

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# POLYMORPHISM IN THE UPPER CRETACEOUS AMMONITE LIBYCOCERAS-ISMAELI (ZITTEL)

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This work gives a full account of the ontogenetic development and variation in a population of the Upper Cretaceous sphenodiscid ammonite Libycoceras ismaeli hadense subsp. nov. The collection, from a single narrow stratum and the same locality, displays a kind of polymorphism. Such polymorphism is reflected strikingly as differences in shell shape and ornament. Some results of the ontogenetic and statistical analyses indicate sexual dimorphism, whereas others may show ecophenotypic polymorphism. The polymorphic variants are identical in their early ontogeny, but differ in mature and adult stages.

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