

Fiber-reinforced composite crowns and FPDs: a clinical report.

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PURPOSE: This clinical study reports on the results of single molar crowns, three-unit inlay fixed partial dentures (FPD), and complete-coverage FPDs made of the glass-fiber composite system Targis/Vectris with an observation period up to 4.4 years. **MATERIALS AND METHODS:** In total, 38 restorations were inserted in 19 patients. Of these, 17 were adhesively fixed three-unit inlay FPDs, five were conventionally cemented complete-coverage three-unit FPDs, and 16 were single molar crowns (six adhesively, ten conventionally cemented). The mean observation period was 2.5 +/- 1.0 years. Events like fracture of the framework or veneer, loss of cementation, signs of wear, and outward discoloration were noted and rated according to modified Ryge criteria. **RESULTS:** During the observation time, neither loss of cementation nor framework fracture were noted. However, six facings (36%) of the inlay FPDs fractured. The number of cases with discoloration or wear increased over time for all types of restorations. The wear culminated in fiber exposure of two molar crowns (24 months) and one inlay FPD (54 months). One of the five complete-coverage FPDs was replaced at the request of the patient (discoloration). The cumulative survival rate after 36 months was estimated to be 82% for molar crowns and 72% for inlay FPDs. **CONCLUSION:** Fiber-reinforced composite restorations need further improvement of the veneering composites. Because of the increasing wear, discoloration, fractures of the facings, and fiber exposure, fiber-reinforced composites should only be used for provisional restorations.

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