

**In vitro repair of all-ceramic and fibre-reinforced composite crowns.**

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Shear bond strength between fibre reinforced composite and all-ceramic frameworks and veneering/repair composites was investigated after different surface treatments for evaluating the possibility of a repair. Then, 24 crowns were adhesively luted on human teeth and artificially aged. Repair quality was characterized by a loading to fracture test, where undamaged crowns were compared to repaired crowns. To simulate repeated damage, aging and repair, the procedure was performed three times for each crown. A combined silicate-silane treatment of the fibre-reinforced composite frameworks and the hydrofluoric acid etching of the ceramic showed good repair qualities and a sufficient fracture strength for clinical application.

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