

I. Fit and Adaptation

Dietschi, D., Romelli, M., and Goretti, A. **Adaptation of Adhesive Posts and Cores to Dentin After Fatigue Testing.** *International Journal of Prosthodontics*. 10: 498-507, 1997.

Abstract/conclusions: An in vitro nondestructive fatigue test was applied to adhesive posts and cores made on endodontically treated human teeth. Five post-and-core systems were evaluated: one Zirconia oxide post, two Titanium posts (with resinous or ceramic coating), and two resin-fiber posts. Each test specimen was intermittently loaded and thermocycled. The scanning electron microscope observation of sample sections showed that only the interfaces between restorative materials and dentin exhibited substantial deficiencies. The Komet ER (Brasseler) exhibited the greatest percentages of continuity at the coronal (83.88%) or the radicular (78.12%) dentin levels, while the Zircon experimental post presented insufficient adaptation to the radicular (21.25% continuity) and to the coronal (53.25% continuity) dentin. Seven of eight samples in the Komet group showed root fractures. The carbon-fiber post (**ComposiPost**) behaved satisfactorily (67.38% radicular continuity), in spite of the use of an older bonding agent formulation.