A basic study on fitness of a zirconia coping fabricated by CAD/CAM system -Application for post for scanning-

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Abstract

The aim of this study was to evaluate the fitting accuracy of zirconia keeper copings manufactured with the CAD/CAM system applying scan posts.

The keeper copings were fabricated with four different cement space made of a zirconia block as specimens (n=3). The accuracy of the specimens was evaluated by cement replica technique. Each silicone replica specimens were sectioned in the buccolingual direction through the center of the coronal root. The thickness of the white silicone layer was examined at 5 measuring points (A: lingual post occlusal transition discrepancy, B: middle of the lingual post discrepancy, C: tip of the post discrepancy, D: middle of the labial post discrepancy, E: labial post occlusal discrepancy).

The mean thickness of the white silicone layer, namely the mean fitting gaps, were 81±22 μm at A, 239±39 μm at B, 574±68 μm, at C , 223±43 μm at D and 67±19 μm at E.

C point had significantly higher value compared with the other measuring points. And there was no significant difference in difference of cement space ($P < 0.05$).