Effects of air polishing on the resin composite-dentin interface

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Abstrak

The aim of this study was to examine defect depths and volumes at the resin composite-dentin (R/D) interface after air polishing with different particles and spray angles. Samples were 54 dentin specimens that were formed in saucer-shaped cavities filled with resin composite. Each specimen was air polished with either sodium bicarbonate (NaHCO3) or one of two glycine (Gly) powders. The air polisher was set at angles of 90° to the interface and at 45° to the interface from both the dentin and resin composite sides. Air polishing with Gly powder produced defects with less depth and volume than NaHCO3 powder ($p < 0.05$). Air polishing with a spray angle of 45° to the interface from the resin composite side produced fewer defects ($p < 0.05$) than polishing from the dentin side. Air polishing to the R/D interface from the resin composite side produced fewer defects to the interface because the hardness of the resin composite was higher than that of dentin.