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[\[Image PDF \(742K\)\]](#) [\[References\]](#)**Effect of Adhesive Primer Developed Exclusively for Heat-curing Resin on Adhesive Strength between Plastic Artificial Tooth and Acrylic Denture Base Resin**[Goro NISHIGAWA](#)¹⁾, [Yukinori MARUO](#)²⁾, [Makoto OKAMOTO](#)²⁾, [Kazuhiro OKI](#)²⁾, [Yoshihiro KINUTA](#)²⁾, [Shogo MINAGI](#)²⁾, [Masao IRIE](#)³⁾ and [Kazuomi SUZUKI](#)³⁾

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Abstract:

Despite progress in the development of denture base resin and artificial tooth materials, dental clinics are still plagued with artificial teeth falling off the denture base - due to poor bond strength - after denture delivery. Against this background, this study sought to examine the effect and durability of an adhesive primer developed exclusively for heat-curing resin on the adhesive strength of heat-curing denture base acrylic resin to plastic artificial tooth. Test specimens were divided into four groups according to the treatment method of the artificial tooth's test bonding surface: air abrasion, adhesive primer application, adhesive primer application after air abrasion, and pretreatment only (control) . After heat curing of acrylic resin onto the bonding surface, shear test was performed for two storage periods: 24-hour versus 100-day water storage. From the results obtained, it was revealed that the evaluated adhesive primer was significantly effective in increasing adhesive strength between artificial tooth and acrylic resin, although specimens were stored in water for 100 days.

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