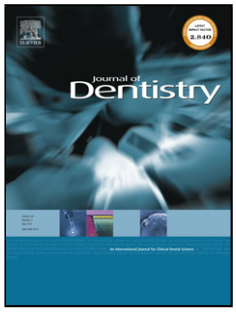


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<AT>No-waiting Dentine Self-Etch Concept – Merit or Hype

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**<ABS-HEAD>Abstract**

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<ABS-P><ST>Objective</ST>*:* A recently-launched universal adhesive, G-Premio Bond, provides clinicians with the alternative to use the self-etch technique for bonding to dentine without waiting for the adhesive to interact with the bonding substrate (no-waiting self-etch; Japanese brochure), or after leaving the adhesive undisturbed for 10 seconds (10-second self-etch; international brochure). The present study was performed to examine *in vitro* performance of this new universal adhesive bonded to human coronal dentine using the two alternative self-etch modes.

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<ABS-P><ST>Methods</ST> One hundred and ten specimens were bonded using two self-etch application modes and examined with or without thermomechanical cycling (10,000 thermal cycles and 240,000 mechanical cycles) to simulate one year of intraoral functioning. The bonded specimens were sectioned for microtensile bond testing, ultrastructural and nanoleakage examination using transmission electron microscopy. Changes in the composition of mineralised dentine after adhesive application were examined using Fourier transform infrared spectroscopy.

<ABS-P><ST>Results</ST> Both reduced application time and thermomechanical cycling resulted in significantly lower bond strengths, thinner hybrid layers, and significantly more extensive nanoleakage after thermomechanical cycling. Using the conventional 10-second application time improved bonding performance when compared with the no-waiting self-