



ABSTRAK DAN RUJUKAN

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The Effect of Disinfectant Solutions on the Durability of the Bond between Resin Based Cement and Non-precious Metal Alloy
(Kesan Disinfektan Larutan Mengenai Ketahanan daripada Ikatan antara Resin Berasaskan Simen dan Aloi Logam Tidak Berharga)

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ABSTRACT

This study evaluated the effect of disinfectants on the tensile bond strength of Nickel-Chromium alloy bonded with resin cement. 180 pairs of Nickel-Chromium dumbbells were prepared. The dumbbells were divided into 3 groups (n=60), which received one of the following treatments: Sandblasted only (control), sandblasted and Perform®-ID or sandblasted and sodium hypochlorite (SH) before bonding with resin cement. All bonded specimens were stored in distilled water for 24 h and half of the specimens were subsequently thermocycled (500 cycles) before debonding. Tensile bond strength was recorded and each dumbbell was examined for failure mode. Two-way ANOVA analysis indicated that overall there was a statistically significant difference between 24 h and thermocycling test, but no differences between sandblasted only, sandblasted and Perform-ID or sandblasted and SH groups. Post-ANOVA contrasts indicated that only the sandblasted and SH group showed a significant difference between the 24 h and thermocycling test. Disinfectants did not significantly decrease tensile bond strength between Nickel-Chromium dumbbells bonded with resin cement.

Keywords: Adhesion; alloys; cements; disinfectants

ABSTRAK

Kajian ini menilai kesan disinfektan pada kekuatan ikatan tegangan aloi nikel-kromium yang terikat dengan simen resin. 180 pasang dumbbells nikel-kromium telah disediakan. Dumbbells kemudiannya dibahagikan kepada 3 kumpulan (n=60) dan menerima salah satu daripada rawatan berikut: Bagas pasir sahaja (kawalan), bagas pasir dan Perform®-ID atau bagas pasir dan natrium hipoklorit (SH) sebelum ikatan dengan resin simen. Semua spesimen ikatan telah disimpan dalam air suling untuk 24

jam dan separuh daripada spesimen tersebut kemudiannya dikitar haba (500 kitaran) sebelum diikat. Kekuatan ikatan tegangan direkod dan setiap dumbbell telah diperiksa untuk mod kegagalan. Analisis ANOVA dua hala menunjukkan bahawa secara keseluruhannya terdapat adalah perbezaan bererti secara statistik antara 24 jam dan ujian pengitaran haba, tetapi perbezaan antara bagas pasir sahaja, bagas pasir dan Perform®-ID atau bagas pasir dan kumpulan SH. Perbezaan Post-ANOVA menunjukkan bahawa hanya bagas pasir dan kumpulan SH menunjukkan perbezaan yang ketara antara 24 jam dan ujian pengitaran haba. Disinfektan pula tidak mengurangkan kekuatan ikatan tegangan antara dumbbells nikel-kromium yang terikat dengan simen resin dengan ketara.

Kata kunci: Aloi; disinfektan; lekat; simen

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