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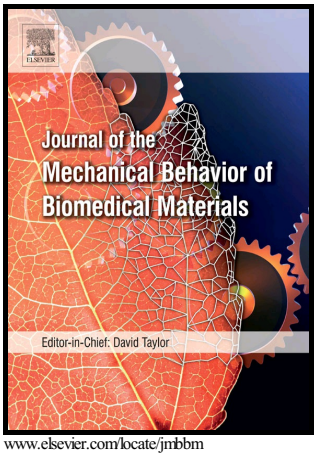

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Investigation of the fatigue behavior of adhesive bonding of the lithium disilicate glass ceramic with three resin cements using rotating fatigue method

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Abstract

***Objective*:** To investigate the fatigue behavior of bonding interface of lithium disilicate ceramic with three different dual cure resin cements.

Material and Methods: Forty five bar shaped ceramic-resin-ceramic specimens were prepared and divided into 3 groups (n=15) according to the resin cement used (group1: Panavia F2.0, group 2: RelyX Ultimate, group 3: Duo-Link Universal). Three specimens of each group were tested using three point bending test and the fracture strength of the resin-ceramic bond was measured. Other specimens of each group were placed in the rotating fatigue testing machine at stresses equal to 30%, 40%, 50% and 60% of the fracture strength. The cyclic loading was continued until fracture or a maximum of 10000 cycles. For the specimens which did not fail until 10000 cycles, the cyclic loading was stopped and the fracture strength of the specimens was measured.

***Results*:** None of the specimens with cyclic loads of 30% and 40% of the fracture strength, have failed until 10000 cycles. After 10000 load cycles, the fracture strength of these specimens was significantly

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