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Comparative laboratory investigation of dual-cured vs. conventional glass ionomer cements for band cementation

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ABSTRACT

This laboratory study compared the mean tensile bond strength, mode of band failure, and survival time of orthodontic bands cemented with dual-cured cement or conventional glass ionomer cement. Survival time was assessed following application of mechanical stress in a ball mill. Mean tensile bond strength was significantly higher for bands cemented with the dual-cured cement ($p < 0.01$), and mean survival time was significantly greater. Bands cemented with glass ionomer failed mainly at the cement/band interface. The results suggest that dual-cured cement is superior to glass ionomer for band cementation.

KEY WORDS: Orthodontic bands, Dual cured cement, Glass ionomer cement, Ball mill.

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