The Angle Orthodontist: **Vol. 66, No. 3, pp. 207–214.**

The effect of sandblasting on the retention of orthodontic bands

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ABSTRACT

A variety of luting cements are available for use with orthodontic bands. This in vitro study was conducted to evaluate the force required to cause debanding when zinc phosphate, polycarboxylate and glass ionomer cements are used as the luting agents; and to determine whether sandblasting the inner surface of orthodontic bands affects the force required to deband. The data were obtained by debanding cemented stainless steel bands from 20 extracted third molars.

Glass ionomer cement demonstrated the highest mean force value required to deband both the nonsandblasted and sandblasted orthodontic bands. Sandblasting the inner surface of the bands proved to be a significant ($P < 0.001$) method for increasing band retention for all three cements tested. The mean force required to deband using zinc phosphate, polycarboxylate and glass ionomer cements was approximately doubled following sandblasting.

KEY WORDS: Cement, Glass ionomer, Sandblasting.

Submitted: August 1994
Accepted: May 1995.