Content-type: text/html

2001 IADR ABSTRACT FORM

Mail form to: IADR, 1619 Duke Street, Alexandria, VA 22314-3406, USA   (FAX SUBMISSIONS WILL BE REFUSED.)

Type perfect original of abstract here: Deadline for submission: January 5, 2001

1326

Microtensile bond strength of several adhesive systems to different dentin depths. M. TOLEDANO*, C. FERNANDES, L. CEBALLOS. M.V. FUENTES, F. TAY, R. OSORIO, R.M. CARVALHO. (U. of Granada, Spain; FOB USP & UF Ceará, Brazil; U. of Hong Kong).

The aim of this study was to determine the microtensile bond strength of five adhesive systems to either superficial (SD) or deep dentin (DD). Extracted human third molars had their crowns transversally sectioned either next to the occlusal DEJ or deeper, next to the pulp, to expose flat dentin surfaces. The surfaces were bonded with either Single Bond (3M), Prime&Bond NT (Dentsply), Excite (Vivadent), Etch&Prime (Degussa) or Clearfil SE Bond (Kuraray) according to directions. Resin build-up crowns were constructed incrementally with Z100 resin composite. After storage for 24 h in water at 37 °C, the teeth were sectioned in both "x" and "y" directions to obtain several bonded sticks of 1.0 mm^2 of cross-sectional area. Each stick was tested in tension in an Instron machine at 0.5 mm/min. Bonded interfaces were examined by TEM. Results were analyzed by 2-Way ANOVA and post-hoc multiple comparisons ($\propto=0.05$). Results were: MPa ± SD, n=20. Means with the same letter are statistically similar. * show differences between SD and DD.

Adhesives	Single Bond	Prime&BNT	Excite	Etch&Prime	Clearfil SEB
SD	41.76(10.8) a	44.38(14.6) a*	36.72(14.4) a*	27.91(11.8) b	43.67(23.9) a
DD	41.13(15.3) A	66.87(17.0) B*	51.48(10.6) A*	36.29(11.9) A	56.50(18.8) B

There were significant differences among materials (p<0.001), dentin depths (p<0.001) and the interactions between factors (p=0.01). The influence of depth on bond strength of adhesive systems to dentin is material dependent. (Grant #MAT98-0937-C02, Spain and CNPq 300481/95-0, Brazil).

Presenter Information:

5. Area of Review (check only one):
(1) □ Behavioral Sciences/Health Services Research

10. List five descriptors by number (see reverse side). If existing descriptors do not fit your research, then write one new word under "Other". (1) 701

[Browse the technical program](#)
of the 79th General Session of the International Association for Dental Research (June 27-30, 2001)