CLBA2012
8 e 9 de novembro
Rio de Janeiro, Brasil
Associação Brasileira de Adesão e Adesivos - ABAA
Associação Portuguesa de Adesão e Adesivos - APAA
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# Dentin Bond Strength Evaluation of Adhesive Systems applied after desensitizer agents.

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*Objectives:* The objective of this in vitro study was to evaluate the influence of desensitizer agents on the microtensile bond strength of adhesive systems to human dentin.

*Materials and Methods:* Thirty-two human third molars had their buccal enamel removed with a diamond saw (Buehler Ltd) to expose the dentin surface. The dentin surfaces were abraded with SiC 600 paper, under water cooling for 10 seconds, immersed on EDTA for 5 minutes and rinsed for 1 minute to standardize the dentin without interfering in their mineralization level. The teeth were randomly divided into four groups (n=8): (1) Clearfil SE Bond, as a control group (CSB, Kuraray); Bifluorid 12 (BFD, Voco) + CSB; MS Coat One (MCO - Sun Medical Co.) + CSB and Gluma Confort Bond + Desensitizer (GBD, Heraeus). The adhesives and desensitizers were applied following the instructions of each manufacturer. Filtek Z350 XT composite (3M ESPE) were incrementally built on dentin surfaces (6 mm thickness) and the teeth were stored for 24h at 37ºC. Restored teeth were vertically and serially sectioned with a diamond saw under water lubrication to obtain bonded specimen (area of approximately 1.0 $mm^2$), which were tested in a universal testing machine (EZ Test, Shimadzu). Data were analyzed by one-way ANOVA and Tukey test (α=5%).

*Results*: The bond strength means (SD) to dentin were (MPa): CSB: 40.6(19.4)a; BFD+CSB: 38.3(10.0)a; MCO+CSB: 34.4(12.0)a; GBD: 36.5(13.6)a.

*Conclusions:* The application of desensitizers before CSB (BFD + CSB and MCO + CSB) did not affect the bond strength to dentin. The bond strength of self-etching and etch-and-rinse adhesive systems (CSB and GBD) to dentin did not differ between them.