tests were performed (Instron 3345). Data was analyzed by two-way ANOVA and Student-Newman-Keuls tests ($p < 0.05$). Failure mode was evaluated using a stereo-microscope at original x40 magnification, and the most representative failures for each group were analyzed by scanning electron microscopy.

Results

The two-way ANOVA showed that the variable dentin pretreatment influenced on the dependent variable bond strength ($p < 0.001$), whereas the root third variable and the interaction between them did not ($p > 0.05$). It was observed that bond strength values after phosphoric acid and polyacrylic acid treatments were statistically similar, but statistically higher than the results achieved by no dentin pretreatment group. The lowest values were obtained by EDTA group.

Conclusions

The bond strength of the self-adhesive resin cement Re-lyX Unicem2 Automix is improved when root dentin is pretreated with a mild (polyacrylic acid 25%) or strong acid (phosphoric acid 35%) before luting fiber posts. The root depth did not influence the push-out bond strength of the cement.

- Oral Presentation 10

TITLE: Five-year clinical evaluation of posterior restorations: silorane- versus methacrylate-based composite

AUTHORS: Baracco B, Fuentes MV, Perdigão J, Ceballos L.

SOURCE: J Clin Exp Dent. 2014 1;6 (Supplement1):S5.

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Objectives

To compare the five-year clinical performance in posterior restorations of three restorative systems including a low-shrinkage system and a methacrylate based composite combined either with an etch-and-rinse or a self-etch adhesive.

Materials and Methods

After signing an informed consent, 25 patients received three Class I (occlusal) or Class II restorations performed with one of three restorative systems: Filtek Silorane Restorative System; Adper Scotchbond 1 XT (two-step etch-and-rinse adhesive) + Filtek Z250; and Adper Scotchbond SE (two-step self-etch adhesive) + Filtek Z250. All materials belong to 3M ESPE and were applied following its

instructions. Two blind observers evaluated the restorations at four different moments (baseline, after one, two and five years) according to the USPHS modified criteria. Kruskal-Wallis and Mann Whitney U tests were used to compare the behavior of the restorative systems, while Friedman and Wilcoxon tests were applied to analyze the intra-system data ($p < 0.05$).

Results

After five years of clinical use, the restorations of Adper Scotchbond SE + Filtek Z250 showed statistically higher marginal staining than the other two restorative systems. Intra-system comparisons between baseline and five-year showed worse marginal adaptation scores for all the systems, while marginal staining increased in both systems composed by self-etch adhesives. Restorations performed with Adper Scotchbond SE + Filtek Z250 also recorded worse values in color match and surface roughness after five years.

Conclusions

The clinical performance of Filtek Silorane after five years was found acceptable. However, this long-term clinical study did not find any advantage of the silorane-over the methacrylate-based composite when combined with an etch-and-rinse adhesive.

- Oral Presentation 11

TITLE: Effects of irrigation solution on radicular dentin

AUTHORS: Barón M, Morales V, Linares M, Escribano N, Ceballos L.

SOURCE: J Clin Exp Dent. 2014 1;6 (Supplement1):S5.

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Objectives

The root canal treatment is potentially aggressive for the radicular dentin. The endodontic solutions used to eliminate bacterial infection can also induce chemical and physical changes in dentin's inorganic and organic components. The aim of this study is to evaluate these changes in dentin composition.

Materials and Methods

Four single root teeth were sectioned at cemento enamel junction. The specimens were instrumented with 10 diameter k-file (Dentsply Maillefer, Switzerland) followed by Protaper Universal system: SX, S1, S2 F1 And F2 (Dentsply, Maillefer, Switzerland). All roots were sectioned into 600-500 μm thick slices. Six specimens