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تحت عنوان:

بررسی استحکام باند پست های همرنگ دندان با عاج ریشه در حضور سیلرهای مختلف اندودنتیک (ZOE, non ZOE)

استاد راهنمای:

دکتر رامین مشرف

نگارنده:

سپیده زارع

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- تصویر شماره ۴: نمونه‌های برش خورده به ضخامت ۳ میلیمتر

## چکیده

**عنوان:** بررسی استحکام باند پست های همنگ دندان با عاج ریشه در حضور سیلرهای مختلف اندودنتیک (ZOE, non ZOE)

## مقدمه:

یکی از عوامل مهم موثر در گیر پست های همنگ به دیواره کanal دندان های درمان ریشه شده، بقایای باقیمانده از سیلرهای اندودنتیک می باشد. هدف از این مطالعه تعیین استحکام باند پست های همنگ دندان با عاج ریشه در حضور سیلرهای مختلف اندودنتیک بود.

## مواد و روشها:

در این مطالعه تجربی-آزمایشگاهی تعداد ۲۰ دندان پرمولر تک کanal فک پایین انتخاب شده و پس از درمان ریشه، به ۲ گروه با نمونه های ۱۰ تایی برای هر نوع سیلر تقسیم شدند: ۱) AH<sub>26</sub> یا سیلر دارای بیس رزینی و ۲) Endofill یا سیلر محتوی اوژنل. سپس پست ها توسط سمان رزینی Panavia F2.0 در داخل ریشه سمان گردیدند. از هر ریشه، ۳) مقطع کرونال-میانی و اپیکالی از مجموعه پست و دندان بدست آمد. از آزمایش tensile post در نواحی مختلف ریشه استفاده گردید. نتایج حاصل با آزمون two way ANOVA و Tukey hoc در سطح معنی داری  $\alpha = 0.05$  مورد بررسی آماری قرار گرفتند.

## یافته ها:

نوع سیلر اندودنتیک به طور معنی داری ( $p value = 0.037$ ) بر استحکام باند کششی اثر داشت اما نوع مقطع ریشه ( $p value = 0.811$ ) و اثر متقابل این دو ( $p value = 0.258$ ) تفاوت آماری معنا داری نداشتند.

## نتیجه گیری:

نوع سیلر اندودنتیک بر استحکام اتصال بین پست فیبری در کanal ریشه موثر است. سیلرهای دارای بیس اوژنل به طور معناداری استحکام اتصال را کاهش دادند.

## کلید واژه ها:

سیمان های رزینی، باندینگ دندانی، روشهای پست و کور، رزین های کامپوزیتی، تقویت با فیبر، استحکام اتصال، اکسید روی-اوژنل.

بررسی استحکام باند پست های همنگ دندان با عاج ریشه در حضور سیلرهای مختلف اندودنتیک

### نتیجه گیری:

استحکام باند پست در حضور سیلرهای مختلف، متفاوت است.

میانگین استحکام باند پست در دندان های درمان ریشه شده با سیلر حاوی ZOE از AH26 کمتر بود.

### پیشنهادات:

پیشنهاد می گردد مشابه این مطالعه بر روی سایر انواع سیلرهای اندودنتیک و با استفاده از سمان های متفاوت انجام گردد.

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## Evaluation of the type of endodontic sealer on the bond strength of a fiber post.

### Abstract:

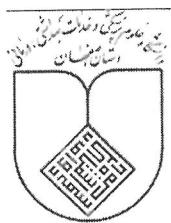
**Purpose:** One important factor that interferes with the bonding between root canal wall and resin cement is endodontic sealer remnants. The aim of this study was to evaluate the effect of endodontic sealer type on the bond strength of FRC posts cemented with resin cement.

**Materials and methods:** In this invitro study, 20 mandibular first premolars were endodontically treated and divided into two groups according to the endodontic sealer used ( $n=10$ ): 1) AH<sub>26</sub> (Resin based) and 2) Endofill (Eugenol-based). Adhesive resin cement (Panavia F 2.0) was used for cementation of the fiber posts to the root canal dentin. Three slices of 3 mm thick were obtained from each root. A universal testing machine was used with a cross-head speed of 1 mm/minute for performing the push-out tests. Two-way ANOVA and Tukey post hoc tests were used for analyzing data ( $\alpha=0.05$ ).

**Result:** Different root canal sealers ( $P=0.037$ ) had significant effects on TBS, but root canal regions ( $P=0.811$ ) and interaction between endodontic sealers and root canal regions ( $P=0.258$ ) had no significant effects on TBS. The AH<sub>26</sub> had the highest TBS mean value especially in the apical region. The lowest TBS mean value was seen in the Endofill group and in the apical region.

**Conclusion:** The type of root canal sealer had significant effect on the bond strength of cemented fiber posts. Eugenol-based sealers (Endofill) significantly reduced the bond strength of fiber posts luted with resin cement.

**Key words:** Resin Cements; Dental Bonding; Post and Core Technique; Composite Resins, Fiber Reinforced; Bond Strength, Zinc Oxide-Eugenol.



Isfahan University of medical sciences

With cooperation of Torabinejad Dental Research Centre

## **Evaluation of the type of endodontic sealer on the bond strength of a fiber post.**

**Supervised by**

Dr. Ramin Mosharraf

**By**

Sepideh Zaree

A thesis submitted to School of Dentistry of Isfahan University of Medical Sciences in partial fulfillment of the requirements for degree of doctor of dental surgery (DDS)

Department of Prosthodontics

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