

Enzymatic modulation as a resource to optimize intra radicular bonding.

Juan A. Fernández Tarazona^{1,2} & Zady J. Torres Rivera.³

Affiliations: ¹Universidad Privada Juan Pablo II, Escuela Profesional de Odontología. Lima, Perú. ²Universidad Nacional Hermilio Valdizán, Escuela Profesional de Odontología. Huánuco, Perú. ³Universidad Privada de Huánuco, Escuela Profesional de Odontología. Huánuco, Perú.

Corresponding author: Juan A. Fernández Tarazona. Jr. Los Ciruelos N° 180, Pillco Marca. Huánuco – Perú. Email: jaft57@hotmail.com

The use of fiber posts as a therapeutic resource in teeth with endodontic treatment and great structural loss in association with their cementation with adhesive procedures is widespread today, but we certainly forget that the radicular substrate is very complex from the perspective of bonding with polymers to the radicular dentine. This is mainly due to the degradation of the collagen from which it is composed, and is key to achieve the formation of the hybrid layer that finally achieves the bonding process.^{1,2}

Enzymatic degradation of the collagen that makes up the dentine is a quite difficult phenomenon to manage even within the coronal dentin, as acid etching and the subsequent application of the adhesive system alone, which are the initial steps for the polymeric bonding to dentine, can induce the release of matrix metalloproteinases (MMPs). These are proteolytic enzymes that involved in the degradation of collagen as result of endodontic treatment, and which complicate the intra-radicular bonding.³

As such, we consider very important to have resources to modulate this degradation process in order to optimize the intra-radicular bonding. Several studies have shown that the application of 2% chlorhexidine in both the coronal and radicular dentine is highly effective for the regulation of the aforementioned degradative enzymatic activity.⁴

Therefore, we suggest applying 2% chlorhexidine for one minute before applying the adhesive system and removing the resulting excess moisture with absorbent paper only, as an additional step when performing adhesive procedures in the radicular dentine, as this procedure results in an increase in the long-term longevity and in the adhesive values for intra-radicular dentine.^{4,5}

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