## COMMENTARY

## Survival Rates for Porcelain Laminate Veneers with Special Reference to the Effect of Preparation in Dentin: A Literature Review<sup>1</sup>

## MARK J. FRIEDMAN, DDS\*

This thought-provoking article represents a review of scientific literature on bonded porcelain veneer restorations.<sup>1</sup> Studies were selected, with one exception, only if they conformed to stringent Cochrane Trials criteria. The primary focus of the review was to determine if tooth preparation past the dentin–enamel junction had an adverse impact on porcelain veneer longevity. The author concludes that strong evidence exists to suggest that veneers bonded to a dentin substrate have a greater risk of failure than those adhered to etched enamel. Nonetheless, some clinicians have advocated using veneers for "Instant Orthodontics." This raises concern, because the risk of dentin exposure is greatly increased with increasing depth of tooth preparation. However, we are reminded that even conservative tooth preparations can expose cervical dentin, and although dentin bonding technology continues to improve, it does not yet equal the reliability of composite bonded to an etched enamel substrate. The author also discussed the importance of an adequate informed consent, so patients understand that veneers rarely have a 100% rate of success. Patients who decide to have bonded porcelain veneers may be subjected to a "cycle of restorative dentistry… since no restoration lasts forever." This is a key point in the article which cannot be overemphasized.

Although this article focused primarily on adhesive failure at the composite-tooth interface, other types of failures have been reported.<sup>2-5</sup> Adhesive failure can occur at the etched porcelain surface, cohesive failure of the porcelain has been observed, but likely the most common "failure" is when the restorations do not meet a patient's esthetic objectives. Removal and replacement can pose an even greater risk to long-term success. Even the most precise restorative methods will undoubtedly remove additional enamel substrate in the replacement process. This assumes that there was a substrate of enamel to preserve beneath the restorations to be replaced.

It is disturbing to witness a continuing trend of widespread disregard for the conservation of tooth structure.<sup>6</sup> An "instant porcelain veneer mentality" has emerged in the profession of which "Instant Orthodontics" is only one example. When indicated and properly performed, porcelain veneer restorations do provide clinicians with an excellent alternative to traditional crowns.<sup>7,8</sup> However, when tooth preparations are aggressive, the distinction between a veneer and a crown becomes mere semantics.<sup>3</sup>

Unfortunately, the Glossary of Prosthodontic Terms does not define a bonded porcelain veneer restoration relative to the bonded substrate. Any informed consent should make a clear distinction between an etched enamel retained veneer versus a dentin bonding retained veneer. Patients must be informed about the long-term implications of having enamel removed to accommodate a bonded restoration. It is axiomatic that as a bonded restoration is removed and replaced multiple times, the need for a full coverage crown to achieve adequate restoration retention is increased. An argument can be made that it is the repetitive "cycle of restorative dentistry" that poses the real unforeseen risk of bonded porcelain veneers. Even if the restorations are placed on an intact enamel substrate and no tooth preparation is performed, eventual failure and replacement is a virtual certainty. This should raise considerable concern when young patients are involved and no prior dental restorations are present.

\*Private Practice Encino, First Financial Plaza, Suite 258, 16830 Ventura Blvd., Encino, CA 91436, USA

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This article provides an important review of the literature to assist clinicians and their patients in making good decisions about bonded porcelain veneer restorations. The evidence suggests that the esthetic benefits of these restorations should always be considered in contrast to the potential risks and conservative alternatives.

## REFERENCES

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