

COMMENTARY

Ultrasonic Margin Preparation for Fixed Prosthodontics: A Pilot Study¹

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In recent years, operative dentistry and fixed prosthodontics have moved toward more conservative and adhesive approaches. The preservation of existing tooth structure has a positive influence on the longevity of tooth restoration complex.

Adhesive technology does require meticulous attention to detail in order to achieve durability. The article by Drs. Horne, Bennani, Chandler, and Purton is an excellent addition to the literature in this arena. It explores an important parameter with regards to tooth preparation. The ultrasonic instruments are an excellent addition to the armamentarium of any restorative dentist today. This pilot study nicely demonstrates how these instruments can create extremely smooth margins, while being conservative at the same time. Lower temperatures during preparation have been shown to maintain tooth vitality. In addition, smear layer removal may be beneficial to bonding to tooth structure. The ultrasonic instruments also have the added advantage that they are simple to use. In other words, clinicians with varying skill levels and experience can easily and efficiently produce smooth margins and clear finish lines with these instruments. This was a personal observation in a dental school setting.

The importance of smooth margins and clear finish lines cannot be emphasized enough. All steps from scanning or impression making to fabrication and delivery may be positively affected by these parameters alone. Ultimately, appropriate attention to detail in this area may result in improved fidelity and longevity of our restorations.

The literature would definitely benefit from more articles related to the use of ultrasonic instruments in restorative dentistry. I am looking forward to reading more publications from this group with larger sample sizes and guidelines to follow.

REFERENCE

1. Horne H, Bennani V, Chandler N, Purton D. Ultrasonic margin preparation for fixed prosthodontics: a pilot study. *J Esthet Restor Dent* DOI 10.1111/j.1708-8240.2011.00477.x.

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This commentary is accompanied by article, "Ultrasonic Margin Preparation for Fixed Prosthodontics: A Pilot Study" Poppy Horne, BDS, Vincent Bennani, DDS, PhD, Nicholas Chandler, BDS, MSC, PhD, David Purton, BDS, MDS, DOI 10.1111/j.1708-8240.2011.00477.x.

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