

Advances In Prosthodontics™

New Findings & Best Practices for Cosmetic & Restorative Dentistry

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Do You Have a Patient with Severe Wear?



Here's the story of a patient who was referred from another dental professional...

If you have a patient with several missing, broken or severely worn teeth — or failing restorations — they may be a candidate for oral rehabilitation with the assistance of an advanced Prosthodontist.

Read more on the next page...

◆ Do you want another opinion on a complex case? Or to talk and share ideas?

There are many ways we can help each other by working together on complex cases and by sharing knowledge and experience.

If you'd like to discuss a treatment, or talk on the phone about how we can help each other, please call or email our office with specific days and times when you're available.

Prosthodontic Publication

Want to see recent issues?

Stay informed on new findings and best practices for cosmetic and restorative dentistry. See more examples of complex cases online at:

AdvancedProsthodontist.com / PleasantonPros

CASE SUMMARY: Using a Conservative Approach with Occlusal Veneers to Treat Worn Dentition

by the Specialists of *Pleasanton Prosthodontics*
Dr. Maggie Chao & Dr. Olivia Nguyen

Patient “Jake” was referred to us by another dental professional due to his complex needs. He hadn’t been to the dentist in a long time; his last professional prophylaxis was at least 6 years prior.

Jake’s diagnosis included: Attrition, Bruxism, Loss of VDO, Malocclusion, Missing teeth #7-10 (he did have existing implants, but a failed FPD), Supraeruption of mandibular anteriors #22-27, Stage III-IV Chronic advanced periodontitis with potential loss of dentition (Grade B), and Diabetes (marginally controlled).

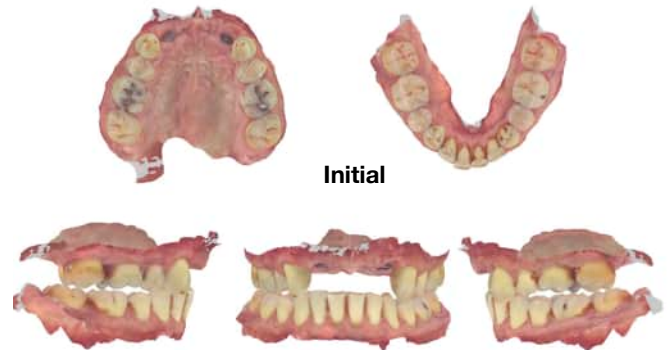
As prosthodontists, we have experience with complex cases, and have developed protocols to ensure patients with failing restorations/failing dentition receive a high esthetic and functional outcome for the restorations.

Jake’s treatment sequence had these steps:

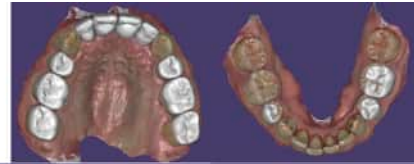
- (1) Bioclear Posterior Overlays/Veneers to increase VDO on #’s 2, 3, 4, 6, 11, 13, 14, 15
- (2) Sc/Rp 4 Quadrants
- (3) Bioclear Posterior Overlays/Veneers to increase VDO on #’s 22, 27, 29
- (4) Final Delivery of Titanium Custom abutments #7, 10, and a Screw-retained Implant FPD #7-x-x-10
 - **Implant type:** Straumann
 - **Crown type:** Zirconia
 - **Access seal:** Teflon/Composite

This case was particularly rewarding because we saw such a dramatic change in such a short time for Jake by using conservative resin restorations. In summary, this case highlights the following:

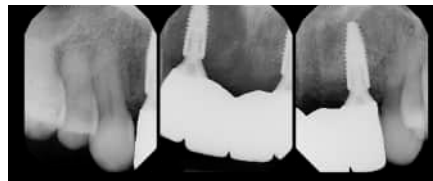
- An esthetic 360 veneer for anterior teeth, but the main reasons we wanted to show this example is to show...
- Bioclear Overlays/Veneers posterior occlusal composites for opening a bite (**learn more on page 4**).



Proposed restoration at opened VDO



Note: maxillary and mandibular canines will also be bonded but were left out of this design.



After, see intraoral on page 1, or smile below.

We give all referred patients a warranty and refer them back to the general dentist for regular hygiene unless advised otherwise by the referring office, depending on the patient and treatment. If you have questions about our prosthodontic protocols, please email us at: office@pleasantonpros.com

◆ Do you have a patient in Jake’s Situation? Or another complex case?

If you have a question about a case and want another opinion, give our office a call. Or, if there’s a case that you want to work together on, please fill out and send in the enclosed referral form.

We will take great care of your patient and keep you informed. Dental professionals refer to us as **The Complex Case Specialists™** because we perform complex cases every day.



Quickly Get the Latest Research On Procedures & Materials For Better Outcomes...

Novel-design ultra-thin CAD/CAM composite resin and ceramic occlusal veneers for the treatment of severe dental erosion

Luís Henrique Schlichting, Hamilton Pires Maia, Luiz Narciso Baratieri, Pascal Magne.
J Prosthet Dent 2011;105:217-226. DOI: 10.1016/S0022-3913(11)60035-8.

Illustration, not part of study

Statement of Problem

Ultra-thin bonded posterior occlusal veneers represent a conservative alternative to traditional inlays and complete coverage crowns for the treatment of severe erosive lesions. There is a lack of data regarding selection of the most appropriate material and its influence on fatigue resistance, which may affect restoration longevity.

Purpose

To assess the influence of CAD/CAM restorative material (ceramic vs. composite resin) on fatigue resistance of ultra-thin occlusal veneers.

Material and methods

A standardized nonretentive tooth preparation (simulating advanced occlusal erosion) was applied to 40 extracted molars including removal of occlusal enamel, and immediate dentin sealing (Optibond FL). All teeth were restored with a 0.6 mm-thick occlusal veneer (Cerec3 chairside CAD/CAM system). Reinforced ceramics (Empress CAD and e.max CAD) and composite resins (Paradigm MZ100 and XR (experimental blocks)) were used to mill the restorations (n=10). The intaglio surfaces were HF-etched and silanated (reinforced ceramics) or airborne-particle abraded and silanated (composite resins). Preparations were airborne-particle abraded and etched before restoration insertion. All restorations were adhesively luted with preheated Filtek Z100. Cyclic isometric loading was applied at 5 Hz, beginning with a load of 200N (x5,000), followed by stages of 400, 600, 800, 1000, 1200 and 1,400N at a maximum of 30,000 cycles each. The number of cycles at initial failure (first cracks) was recorded. Specimens were loaded until catastrophic failure (lost restoration fragment) or to a maximum of 185,000 cycles. Groups were compared using the life table survival analysis ($\alpha=.008$, Bonferroni-method).

Results

Empress CAD and e.max CAD initially failed at an average load of 500N and 800N, respectively with no specimen withstanding all 185,000 load cycles (survival 0%); with MZ100 and XR the survival rate was 60% and 100%, respectively.

Conclusions

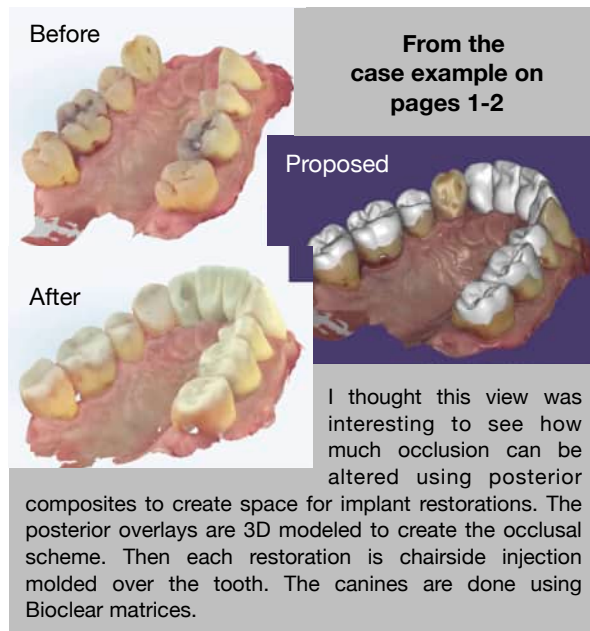
Both composite resins (MZ100 and XR) increased the fatigue resistance of ultra-thin occlusal veneers ($P<.001$) when compared to the ceramics evaluated (Empress CAD and e.max CAD).

Clinical Implications

CAD/CAM composite resins may provide better fracture resistance for nonretentive ultra-thin occlusal veneers in posterior teeth with high load requirements. If porcelain is required, e.max CAD may be indicated only for normal occlusal conditions.

Thoughts

We have modified our technique to make the restorations injection-molded instead of cemented as in this article. The concept is the same.



◆ Why other dental professionals work with a Certified Prosthodontist

Certified Prosthodontists are specialists in implant, esthetic, and reconstructive dentistry.

1. You have a patient requiring treatment outside your typical scope of practice.
2. You have a patient with complex needs that may drain your time.
3. You have a demanding patient who wants perfect esthetics.
4. You have a question and want to discuss a case with a colleague to ease your mind.

Bioclear Restorations

Bioclear is a minimally-invasive method of injection-molding composite resin to augment misshapen teeth, close black triangles, restore cavities, and achieve smile makeovers in one appointment!

The Bioclear Method: Closing Black Triangles



A black triangle forms when the gum does not fill the space between teeth. These little triangles are often exposed after teeth are straightened and easily addressed with Bioclear!

Full Smile Makeover



Bioclear can give you a fuller, brighter smile that shines like porcelain while preserving organic tooth structure to deliver natural-looking results.

Bonding vs. Bioclear Veneers

Bonding can lengthen and widen teeth if there is space. It is an excellent procedure for repairing chipped teeth or filling cavities. Resin is applied to the edge of the tooth and feathered to blend in. This margin where the composite meets the front tooth surface can catch stain over time. Bonding typically lasts 4-8 years.



Bioclear veneers give a fuller appearance. The resin is applied by injection molding and ensconces the tooth. This creates a stronger restoration that does not lend itself to stained margins, need for touchups or redos in the future. Studies show that a well-done Bioclear restoration is as strong as a lithium disilicate (IPS e.max) veneer. Bioclear veneers typically last 10-15 years.



Dr. Maggie Chao and Dr. Olivia Nguyen at **Pleasanton Prosthodontics** are experts in Bioclear and would love to consult with you on whether Bioclear restorations are right for you!



◆ How can a Prosthodontist assist you and your dental team?

We specialize in the treatment of complex cases, usually involving several procedures over months of care. The next time you see a challenging case, please feel free to call us and we can discuss treatment planning or help you with any part of the treatment.