Perspectives

PERSPECTIVES FROM THE GRADUATE PROSTHODONTICS PROGRAM AT THE UNIVERSITY OF WASHINGTON

N Tote from the Editor-in-Chief:

The following perspective feature is from Dr. Ariel Raigrodski, Graduate Program Director of Prosthodontics at the University of Washington School of Dentistry. Many graduate programs exist throughout the United States, and most emphasize the importance of scholarly activity in forwarding the knowledge base in their respective disciplines. The *Journal of Esthetic and Restorative Dentistry* is pleased to be able to recognize the importance of publications from graduate programs by highlighting three clinical papers authored by the residents of one such outstanding graduate program. The following perspectives feature from Dr. Raigrodski addresses the importance of maintaining sound treatment planning and restorative concepts while integrating everevolving materials and technologies into clinical practice and how his graduate program strives to meet these challenges.

Harald O. Heymann, Editor-in-Chief

It is my distinct honor and pleasure to serve as the guest editor of this issue of the Journal of Esthetic and Restorative Dentistry. This issue is dedicated to sharing the concepts and thoughts as well as the clinical work of the students in the Graduate Prosthodontics Program at the University of Washington in Seattle. With a rich history and heritage, the Graduate Prosthodontics Program at the University of Washington continues to strive for excellence in terms of uncompromised prosthodontic concepts, interdisciplinary treatment planning, and patient care while exploring cutting edge techniques and technologies.

Our program actively engages with and emphasizes all facets of prosthodontics including fixed prosthodontics, removable prosthodontics, implant dentistry (including implant surgical procedures), allceramics and computer-aided design and computer-aided manufacturing (CAD/CAM) technology, and esthetics. The emphasis in our program has always been on comprehensive treatment planning, multidisciplinary treatment approach, and close collaboration with other specialties, particularly with the Graduate Periodontics Program. Our graduate students treatment plan extensive cases and carefully execute treatment

with a team of prosthodontists, periodontists, orthodontists, endodontists, oral surgeons, and master ceramists.

As with any specialty program, our graduate students are the most valuable asset the profession has, and they are the ones who inspire us to constantly improve and become better educators and better clinicians. It is certainly our continuous and ever-evolving challenge as dental educators to provide our graduate students with the tools to render excellent comprehensive patient care while preparing them for the challenges of private practice. As such, our program continues to provide a comprehensive and challenging environment for our graduate students, encouraging them to develop their expertise as they desire in terms of different facets of the specialty. Although we encourage them to primarily develop into excellent clinicians, we also try to motivate them toward becoming dental educators. Certainly, in such a vibrant and enthusiastic environment, we as faculty are constantly challenged and are required to "sharpen the saw" and continue developing and improving.

With that in mind, I would like to emphasize in this editorial the challenges we face in integrating new technologies into the Graduate Prosthodontics program while maintaining sound treatment planning and restorative concepts. In terms of treatment planning, it may seem that esthetics is becoming a more dominant component of our specialty; however, a close look at the history of the specialty and rereading classic articles such as Pound,¹ Frush and Fisher,² and Lombardi³ refutes that notion. One must bear in mind that esthetics has been a paramount component of prosthodontics for many years now, particularly when treating patients with complete dentures. Thus, we harness those concepts to our treatment planning sequence for different treatment modalities such as full-mouth tooth- and

implant-supported rehabilitations as well as combination and anterior esthetics cases.

New technologies and treatment options have facilitated our ability to provide successful patient care in a more conservative and esthetic manner while providing our patients with excellent and predictable results. We are fortunate in our program to be equipped with digital scanners and new software for different CAD/CAM technologies. One such example is the CAD/CAM technology for implant placement, which has enhanced our ability not only to treatment plan the patient but also to accurately execute such treatment. Currently in our program, the design of implant cases is assisted by the use of such technologies as the cone beam computerized tomography (CBCT) and CAD-generated surgical guides for accurate implant placement. New technologies have also improved our techniques in fabricating custom abutments for implant-supported restorations. In the past, we used the lost wax technique for the fabrication of high-noble alloy custom abutments. The goal was to create an ideal emergence profile in the quest for providing our patients with natural-looking implantsupported restorations with an adequate esthetic integration at the soft-tissue restorative interface. Currently, however, we may choose one of two in-house options: we can either scan that same ideal wax pattern or use CAD capabilities to design the abutment to be fabricated from either titanium or tooth-colored zirconia. In addition, novel CAD/CAM technologies allow us to fabricate titanium or zirconia frameworks for full-arch implant hybrid prostheses, which were otherwise made of high-noble alloys with complex casting techniques, as well as crown copings and fixed partial denture frameworks.

As part of the comprehensive treatment rendered in our program, integrating conservative restorative treatment modalities such as porcelain laminate veneers has become a standard. With the concept of diagnostically driven tooth preparation and tooth structure preservation, porcelain laminate veneers have been proven to be a successful treatment modality.^{4–6} They not only provide suitable esthetics but also a reliable functional solution in particular to more challenging cases such as full-mouth rehabilitations, where the occlusal vertical dimension may be altered, utilizing anterior mandibular porcelain laminate veneers.

These are certainly exciting times for the specialty of prosthodontics with the continuous evolution of implant dentistry, all-ceramics, and CAD/CAM technology. Restorative success is not only measured by the longevity of the restoration but also by its ability to integrate esthetically with the natural hard and soft tissues. This integration is one of the main challenges we all face in practice. Our graduate students and I dedicate this issue to my predecessors who have directed the program through the years, to our past and current faculty, and to all of the graduates of the program who have made a tremendous mark on the profession.

Ariel J. Raigrodski, DMD, MS

REFERENCES

- Pound E. Esthetics and phonetics in full denture construction. J Calif Dent Assoc 1950;26:179–85.
- Frush JP, Fisher RD. Introduction to dentogenic restorations. J Prosthet Dent 1955;5:586–95.
- Lombardi RE. The principles of visual perception and their clinical application to denture esthetics. J Prosthet Dent 1973;29:358.
- Friedman MJ. A 15-year review of porcelain veneer failure—a clinician's observations. Compend Contin Educ Dent 1998;19:625–32.

- Fradeani M, Redemagni M, Corrado M. Porcelain laminate veneers: 6- to 12-year clinical evaluation—a retrospective study. Int J Periodontics Restorative Dent 2005;25(1):9–17.
- Layton D, Walton T. An up to 16-year prospective study of 304 porcelain veneers. Int J Prosthodont 2007;20:389–96.

Ariel J. Raigrodski is an associate professor and director of Graduate Prosthodontics at the Department of Restorative Dentistry at the University of Washington; e-mail: araigrod@u.washington.edu

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