COMMENTARY

FULL MOUTH RESTORATION ON DENTAL IMPLANTS UTILIZING TITANIUM LASER-WELDED FRAMEWORKS

R. Scott Eidson, DDS*

The use of dental implants for our edentulous patients is now the standard of care. The ability of dental implants to improve function and preserve bone for our patients over the course of their lifetime is well documented. This makes it imperative for dental practitioners to find cost-effective ways to deliver this treatment to the highest level of esthetics, comfort, and function that is possible. These findings make it a challenge for all dental practitioners to be able to expand this treatment modality to a greater percentage of the edentulous population. It has been estimated that less than 5% of the edentulous population in the United States has had dental implants placed to support their dentures. Implant-supported dentures can improve nutrition values for edentulous patients and contribute to an overall improvement on their outlook on their edentulous condition. To make our treatment as affordable as possible and to reach the most patients possible, we must continue to find ways to deliver dental implant therapy for edentulous patients more efficiently and with increased predictability.

With this paper, the author has shown the importance in preplanning the desired outcome and expectations of patients who are transitioning from a dentate to an edentulous situation. Providing outcomes that are predictable and cost effective are the best way to ensure patient satisfaction with our treatments. Detailed discussions of options within a dental implant modality also provide the patient with information that helps balance expectations with results. It is also important that we fabricate prostheses for these patients that are long-term solutions with fit and strength issues eliminated as much as possible. Dental implants for dentures are not a solution to remedy ill-fitting dentures or correct occlusion problems. The author has outlined a very detailed step by step protocol that looks at the final implant prostheses as an evolution of treatment that improves esthetics and function as the treatment progresses. It is very important that the patients feel that each step in the treatment is an improvement over what they had previously both functionally and esthetically. I can appreciate the detailed steps the author takes in ensuring accuracy in fit, function, and esthetics and not rushing to a final prosthesis without multiple opportunities for "trial runs" of interim dentures, wax rims, and teeth setups. As I have heard on many occasions from my own personal mentors, "one miracle at a time" can be a good protocol in the long run for treatment success and patient satisfaction.

The author points to the advantage of laser welding over conventional wax-casting techniques. This method points to a very important direction we are headed in all of our prosthetic dental treatment. He presents very convincing evidence that this method of creating a framework has the potential to be more accurate and more cost effective with less potential for clinical errors than the older method of wax casting. Our use of computer-generated information either from the patient's anatomy or in the form of digital impressions or stents is going to improve and contribute to better, faster, and more accurate patient outcomes. We will be able to deliver better dentistry in less time. In this case, with the use of prefabricated titanium abutments and the use of laser welding, the lab costs can be reduced, and the chair time required remakes and sectioning of cast frameworks can be greatly reduced or eliminated. This reduces stress to the dentist and the patient. All of this increases predictability for the patient's treatment. As noted by the author, the accuracy is reflected in the final occlusion of the prostheses. He notes little to no adjustments needed and this again reflects increased efficiency and predictability.

The next steps in efficiency of treatment are already upon us and are rapidly developing. The use of Cone Beam CTs for patient planning and implant placement has increased dramatically in the last 10 years. What was unheard of just a few years ago is the standard of care in today's dental practice. The same can be said for lab fabrication of components for implant prosthesis and crown and bridge. Entire frameworks can be milled from solid blocks of titanium to

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extreme tolerances. The cost of these will improve in the future and continued development of software and hardware will continue to expand our horizons. Our challenge as clinicians in treating our edentulous patients is finding ways to include more of these patients with implant supported and retained dentures. We need not only to find increased efficiencies in optimum treatment cases such as this but also to look for treatment protocols and materials that can be predictably used to bring down the common barriers of financial, fear, and time concerns that currently limit our utilization of implants for our edentulous population.

*Associate Professor, Department of Operative Dentistry, UNC School of Dentistry, Chapel Hill, NC, USA