



# Treatment Planning in Implant Dentistry

SAJID A. JIVRAJ, DDS, MSED

The clinical replacement of lost natural teeth by osseointegrated implants has represented one of the most significant advances in restorative dentistry. Two decades ago, a vocal majority of dentists were skeptical about implants and rejected them entirely. Today, it is rare to find a practitioner who does not work with dental implants or who is not actively participating in one of the many seminars or courses offered by universities, professional societies and implant manufacturers.<sup>1</sup>

Compared to all other dental disciplines, implant dentistry has enjoyed far more innovation and progressive development in recent years. Included in this regard are the developments of new implant systems, the propagation of new and improved diagnostic procedures, the introduction of novel surgical techniques, quantum leaps forward in prosthodontic precision of fit, as well as exploitation of state-of-the-art industrial technologies such as CAD/CAM.

Today's patients have high expectations regarding esthetics and providing functional and comfortable restorations alone may not be sufficient to satisfy many of them.<sup>2</sup> With heightened esthetic expectations, it becomes imperative the restorative dentist understand the

patient's desires and expectations prior to embarking upon any irreversible therapy. Moreover, emphasis should be placed on diagnosis and treatment planning because in most situations, the proper diagnosis will dictate the appropriate treatment plan. Inadequately planned treatment, even when well executed, will result in less than ideal treatment.

Esthetics is one of the main reasons why restorative dentists embrace implant technology. Naturally, many implant manufacturers attempt to identify their systems as esthetic. From an objective viewpoint, implant parts, in of themselves, are not esthetic. There is not a single implant component that is the perfect esthetic replacement for a central incisor.<sup>3</sup> Esthetic outcomes are dependent on many variables, including initial site integrity, preoperative assessment, the success of augmentation procedures, the artistry of the dental technician and finally, components. It is not the specific implant design, surface characteristics or type of abutment that will guarantee an esthetic result. It is, rather, the time spent on data collection in reaching a correct diagnosis that pays dividends in terms of function and esthetics.

Diagnosis and treatment planning must have a proven scientific basis if consistency of results is to be achieved. Without science as our guiding light, any implant success is limited to initial

gratification and ignores the far greater elements of a problematic outcome yet to occur.<sup>4</sup> As practicing clinicians, we must critically evaluate clinical procedures and seek reliable data to substantiate their use. The importance of long-term follow up cannot be overemphasized. Strong evidence comes from prospective, randomized double-blinded clinical trials. Retrospective case studies and case reports, while possibly suggesting certain trends, are still open to question and should not be relied upon as the "benchmark," upon which to make clinical decisions.<sup>5</sup>

The replacement of missing teeth with dental implants remains a difficult task under most conditions. With comprehensive treatment planning and proper surgical and restorative protocols, satisfactory results can be achieved. The articles in this issue have been assembled to address diagnosis and treatment planning considerations as the cornerstone to success in implant dentistry.

In the first article, Paolo Corrado, MD, DDS, Winston W.L. Chee, DDS, and I outline the blueprint for a com-



**Guest Editor / Sajid A. Jivraj, DDS, MSED**, is chairman of the Section of Fixed Prosthodontics and Operative Dentistry at the University of Southern California School of Dentistry. He also maintains a private practice limited to prosthodontics in Burbank, Calif.



prehensive interdisciplinary treatment philosophy designed for developing the foundation for optimal esthetics in implant dentistry. William Becker, DDS, MSD, will look at the evidence behind immediate implant placement and the role it plays in hard and soft tissue preservation. Dr. Chee discusses treatment planning parameters for implant-supported partial overdentures. Some cases will be presented.

Nikitas Mordohai, DDS, and Mamaly Reshad, DDS, MSc, will critically evaluate the literature and give guidelines as to when a tooth should be kept or extracted in favor of an implant replacement. Clark Stanford, DDS, PhD, explores the evidence behind implant

occlusion and decipher what we know, what we don't know, and what we still need to know. Lastly, Krikor Derbabian, DDS, and Krikor Simonian, DDS will address the subject of immediate loading and discuss the factors that need to be considered in order to optimize both surgical and prosthodontic success.

Although new components offering improved esthetic potential are constantly being introduced by different manufacturers, it is the process of pre-operative evaluation and diagnosis which determines the esthetic and functional outcome. We live in an age where technology continues to improve. However, in spite of these technical improvements, a diagnostic perspective

is still required for long-term success.

My intention with this issue is to look at the thought process behind treatment planning in implant dentistry. I sincerely hope the articles in this issue inspire readers to seek further knowledge in this ever-developing field. **CDA**

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