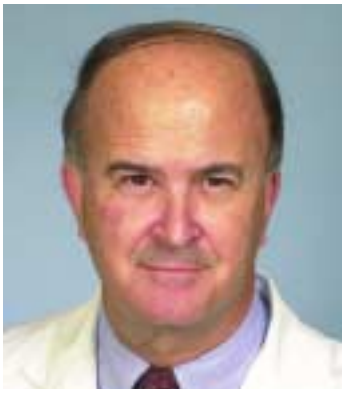
Guest Editorial

OSSEOINTEGRATION RESEARCH AND PROSTHODONTIC TREATMENT DECISIONS



Dr. George A. Zarb

The current public outcry against genetic engineering and regenerative medicine is a timely reminder of dentistry's relatively small, if indispensable, role in overall health concerns and innovations. The utopian vision of replenishing organ stocks and employing biotechnology to guarantee longevity remains an integral part of today's miracle medicine scenario. However, the glittering promise of such research has intimidated many citizens and led to a demand for greater vigilance, restraint and integrity on the part of scientists and governments. Luckily, we dentists have not been unduly burdened with such tricky ethical questions associated with genetics or organ transplantation. We have been in the 'spare parts' business for a long time, but without experiencing the same degree of anguish as our medical colleagues. Our descriptive term for dentistry's involvement in hard- and soft-tissue analogs — prosthodontics — remains a tongue twister. All too often it conjures up memories of frustrating dental school pre-clinical experiences. Yet our profession's long-standing tradition of readily endorsing evidence-based, applied replacement technology has served us well, as we sought to artificially replicate what has been lost in the oral cavity. Hence the commitment of Canadian dental schools to explore oral implant biotechnology to enhance the quality of life of prosthodontic patients, as compared to the much greater medical challenge of using biotechnology to prolong patient lives. Osseointegrated dental implants have given the applied disciplines of surgery and prosthodontics (and more recently periodontics) much scope to fulfill the 3 remits of dental scholarship — education, service and research. Clinical educators today insist on the highest evidence-based standards for their clinical protocols and continue to contribute significantly to a scrupulously constructed scaffolding of international scholarship in the field.

Beginning with the original Toronto Conference on Osseointegration in 1982, the Implant Prosthodontic Unit (IPU) at the University of Toronto has sought to provide both patients and dentists with clinical information that would ensure predictable and optimal treatment outcomes. We have done this by serving the public through a faculty clinical unit, continuing education courses and numerous publications, as well as by hosting several international symposia. The most recent ones have been "Towards Optimized Treatment Outcomes for Dental Implants," reported in the September/October 1998 issue of the *International Journal of Prosthodontics*, and the symposium "On Ageing, Osteoporosis and Dental Implants," whose proceedings were published by *Quintessence International* in November 2001.

The 5 papers in this issue are concise reports from recent graduate residents in prosthodontics. The articles reflect information collected for our clinical database that determines the IPU's modus operandi. While our clinical team has selected the Brånemark system exclusively for managing our patients' prosthodontic challenges, we would expect that comparable documentation on other systems would prove to be equally beneficial over comparable durations of study. This information will hopefully provide additional pieces of the clinical management puzzle and clarify further the overall picture of clinical decision-making for prosthodontic patients. The clinical treatment described in the articles was provided by specialists-in-training from the disciplines of oral surgery, periodontics and prosthodontics. The surgical and prosthodontic supervision was carried out by Drs. James Anderson, Gerald Baker, Izchak Barzilay, Peter Birek, Robert Carmichael, Cameron Clokie, Lesley David, Aaron Fenton, David Psutka, David Walker, Francis Zarb and myself. Together we sought to articulate a decision-making protocol based on our database. Quite inevitably, a new synergy between the prosthodontic and surgical disciplines has now evolved in the management of partially and completely edentulous patients that has yielded compelling clinical outcomes which reconcile both patient and dentist concerns. These outcomes have largely eclipsed previous methods of preprosthetic surgery and periodontal/prosthodontic protocols that sought a heroic prolongation of so many compromised dentitions. As a result, our profession's leadership in the biological 'spare parts' business has soared to new heights, and our patients continue to be major beneficiaries of such applied clinical research.

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