

Towards Optimized Treatment Outcomes for Dental Implants

Editor's note: This issue presents the proceedings of the symposium "Towards Optimized Treatment Outcomes for Dental Implants" held at the University of Toronto April 24–25, 1998. The organizing committee, chaired by Dr George Zarb, University of Toronto, and Dr Tomas Albrektsson, Göteborg University, designed a very ambitious program, including thought-provoking literature reviews by 12 selected speakers and stimulating study-group discussions, with the purpose of developing a consensus report. Besides the reviewers, an international panel comprising clinicians, researchers, educators, and editors with expertise in the field of dental implants were invited to participate in the working groups. Drs Zarb and Albrektsson provide the background of the symposium in their Guest Editorial. Elsewhere in this issue they offer their interpretation of correct clinical reporting, which will be of value not only for future authors, but also for readers of publications on treatment outcomes of clinical practice and research.

We are proud to be able to publish the papers presented at the symposium and the resulting consensus document just 5 months after it took place. This achievement has been possible thanks to the kind and efficient collaboration of the organizers, the reviewers/authors, and of course the professional staff at Quintessence Publishing Co.

A minor disadvantage of publishing these proceedings in a regular issue of the *IJP* is that the "normal submissions" will have to wait an extra period of 2 months. I hope that those authors awaiting publication of their articles will agree that the interesting contributions in this issue are valuable not only for implant dentistry, but should also enrich the specialty of prosthodontics.

Gunnar E. Carlsson
Editor-in-Chief

Five simple tools—the lever, wedge, wheel and axle, pulley, and screw—have existed for millennia. Each of these tools and their underlying principles have been refined, improved, and combined in various ways to produce other tools and engineering principles (no longer simple), which in turn have revolutionized the application of modern dental techniques. This process has been particularly important in the disciplines of surgery and prosthodontics. Archimedes, in the third century BC, understood the operation of the mechanical screw, which represents a basic tenet of endosseous stabilization, albeit limited in its time- and biologically dependent efficacy and effectiveness.

A scientific transition in the nature of interfacial screw–host bone behavior involving commercially pure titanium implants was reported by Per-Ingvar Brånemark in 1977, and the field of dental implants entered a new era of therapeutic possibilities.¹ Interestingly, Brånemark's results and the success criteria proposed by a National Institutes of Health consensus conference in 1979 were published almost simultaneously.² The latter document, a well-intentioned synthesis of largely retrospective observations, was quickly eclipsed by Brånemark's and others' emerging confirmatory results. Consequently, in 1986, in collaboration with Philip Worthington and Anders Ericsson, we proposed success criteria³ rather than mere survival statistics in our description of desirable treatment outcomes for osseointegrated implants. Our clinical yardstick and subsequent "fine tuning" versions^{4,5} underscored the clinical nature of the induced interfacial response, together with the subtle yet profound clinical implications of such tooth abutment analogues: they had to be painless, immobile, surrounded by bone in a steady state, and capable of being employed for diverse prosthodontic solutions, from single-crown support to retention of extensive maxillofacial prostheses.

We sought to include strict success criteria in the context of patient-mediated concerns regarding absence of pain, discomfort, and infection, as well as the additional caveat of a satisfactory appearance. In retrospect, patient concerns were perhaps insufficiently emphasized, at least in a quantifiable context. Nonetheless,

over the years we were gratified to note that several prospective studies in leading refereed journals adopted our yardstick. However, not all reports on new implant systems did so. Commercial claims insidiously undermined scientific standards as celebrity groups of osseointegrated implant proponents sought to compete with the scrupulously constructed scaffolding of international scholarship that was emerging. Sloganeering and self-promotion have traditionally sought inroads into the science of dentistry, but the advent of osseointegration elicited an unparalleled commercial culture that sought to usurp the commitment to evidence-based management of the sequelae of oral diseases. The most glaring example was the profession's newfound fascination with cosmetic dentistry, which provided the rhetoric to market services of dubious health necessity. Oral renovation began to replace oral health as the profession's clarion call for the decade. And dental implants as a prosthodontic treatment alternative inevitably spawned surgical techniques and restorative hardware that ran the risk of becoming ends in themselves.

Hence our perceived need for a symposium on "Towards Optimized Treatment Outcomes for Dental Implants." With the support of the University of Toronto, the Medical Research Council of Canada, Dentistry Canada, Göteborg University Craniofacial Reconstruction Unit, and Quintessence Publishing Co, Inc, we were able to organize a meeting that comprised the scholars listed on pages 387 and 388. By bringing together reviewers, researchers, and educators from the international scholarly community, we succeeded in carrying out informed discourse and provocative exchange. The result is the consensus report on page 389, which synthesizes the symposium discussions and reflects the scrupulous and judicious wordsmithing of those "high priests" of scientific clinical reporting editors representing some of clinical dentistry's most distinguished journals: Drs William Becker, Gunnar E. Carlsson, Arnold Franks, Michael Fritz, William Laney, Daniel Laskin, Patrick Lloyd, Glen McGivney, and Hans-Peter Weber. With their help and that of the symposium's participants, we have reinforced our conviction that the pen is still mightier than the drill—or an implant's design. The notes provided by co-chairs of the working groups also contributed significantly to the synthesis "Determinants of Correct Clinical Reporting," which begins on page 517, and should be regarded as adjunctive to the consensus report.

We therefore hope that this consensus will provide a yardstick by which all editors will judge future reports on implant treatment efficacy and effectiveness. We also hope that the obvious lack of quantifiable data especially in the areas of patient-mediated concerns will spawn much-needed research. In the meantime, David Locker's very apt statement demands careful scrutiny: "patients, having weighed the involved costs and discomforts, should be satisfied that there has been an improvement; and that they are better off in certain dimensions of their life that they consider to be valuable" (personal communication, April 1988). Together with all symposium participants, we remain convinced that in our ongoing pursuit of reliable outcome measures, our profession must never lose sight of its mission: the enrichment of our patients' quality of life.

George A. Zarb, B ChD, DDS, MS, MS, FRCD(C)
University of Toronto

Tomas Albrektsson, MD, PhD
Göteborg University

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