



More on Implant Prosthodontics, and on Lingering Concerns

Patients want to live as long as possible; to function normally; to be free of pain or other physical, psychologic, or social symptoms; to be free of iatrogenic problems from any treatment regimen; and to remain financially solvent after treatment completion. These desires underscore the biopsychosocial model for disease and health and should arguably be applied to all therapeutic interventions.

Although implant-supported prostheses are unlikely to prolong a patient's life, they certainly enrich the quality of that life. Ask any patient with a chronic history of prosthesis maladaptation and whose predicament was rectified by implant treatment, and you will seriously wonder why a need for quantifiable quality-of-life measures for prosthodontic treatment is really needed. What seems to count for these patients and their dentists is that virtually all endorse David Locker's observation, "That having weighed the involved costs and discomforts, patients are satisfied that there has been an improvement, and that they are better off." This is a virtual given for most patients treated with implant prosthodontics. However, the issue of financial considerations remains critically important as long as the association between cost-effectiveness, cost benefit, and cost utility of implant treatment remains an unresolved challenge. Therefore, concerned clinical scientists continue their search for even more relevant clinical outcome determinants than the ones we have employed to date. Better still, these criteria also need to be applied to all available implant systems in the context of time-dependent and patient/dentist-mediated concerns if implant therapy is to eclipse traditional prosthodontic replacements in the domains of efficacy and effectiveness.

One of the most compelling aspects of Per-Ingvar Brånemark's original work was a raising of the bar in reporting long-term clinical outcomes for prosthodontic and surgically related interventions. It is probably ungracious and unfair to retroactively cite shortcomings in the design of the original osseointegration reports during the first decade after its launch. The influential papers from the early heady days of the induced interfacial osteogenesis technique inevitably sought the objective of engaging other dentists in the art of persuasion. After all, clinical scientists, however eloquent and respected, persist in promoting and sharing their observational interpretations and try to influence their colleagues. Theirs is the pedagogic need to embark

upon intellectual trips in seaworthy vessels. At this stage of development, dental science can be likened to a boat which we must rebuild plank by plank while staying afloat. And in an applied health science like prosthodontics, the clinician and the basic scientist are very much in the same boat. Their coordinated efforts to work together and rebuild are essential if the professional remit of *primum non nocere* is to be sustained.

Hence the significance of papers such as the one on "Quality of Dental Implants" in this issue, and which has already appeared in the *International Dental Journal* (Int Dent J 2003;53:409–443). Its six highly respected international authors—Asbjørn Jokstad, Urs Braegger, John Brunski, Alan Carr, Ignace Naert and Ann Wennerberg—provide an excellent analysis of the scientific literature in an effort to determine if there is a relationship between characteristics of dental implants and clinical performance.

When I assumed the editorship of *The International Journal of Prosthodontics* earlier this year, I thought of initiating alternative approaches to the traditional presentation of scientific papers. One possibility was to identify published papers which focus on important issues particularly well; ones which demand collective outside analysis regarding clinical implications. This paper was clearly such an example. I was therefore delighted to obtain the authors' approval, as well as publication permission from Dr Stephen Hancocks, OBE, editor of the *International Dental Journal*. It should be emphasized that the report was initiated, and the document approved, by the FDI Science Commission. Its major conclusion may appear alarming, as it suggests that there are no clear directives regarding claims of alleged benefits of specific morphological characteristics of dental implants. This is a provocative statement indeed, and may even be temptingly adopted by some faint-hearted clinical educators in an effort to remove those planks of implant treatment from the prosthodontic boat. However, there is so much more to this paper than the news that there are currently no alleged benefits associated with implants' morphological characteristics. Whereas the authors make it clear that therapeutic success cannot be purchased in a package (see John Hobkirk's response, page 645), the need for a rational assimilation of the role of implants in clinical decision-making is strongly highlighted both indirectly and in the final analysis. I therefore thought it opportune

to invite 11 members of the *IJP* editorial team—all also highly regarded prosthodontic scholars—to comment on the paper. They responded in the context of four general questions:

- Do you regard this systematic report as significant?
- What additional research information is required to ensure optimal evidence-based decisions for our patients?
- Has the report changed your implant practice concerns in any way?
- How would you use this paper in guiding your residents/staff/students to approach implant prosthodontic decision-making?

Their responses are incisively analytical and further enrich the paper's merits; they make for a very stimulating read.

Now consider that the choice of implant per se remains a pivotal concern in treatment outcomes. But it is clearly far from the only determinant of clinical success, let alone universality of prescription and all the attendant implications, including financial ones. In fact, we may have to concede that scientifically based product differentiation in a very crowded market may not be feasible. This will only occur when health agencies or implant companies are prepared to underwrite the costs of the complex and expensive clinical trials designed to provide the necessary rigorous clinical documentation. In the interim, it would be irresponsible to allow this fact to militate against the need to continue to act and prescribe prognostically sound implant therapy as per our current criteria for a few well-researched implant systems.

The recent symposium “On Biological and Social Interfaces in Prosthodontics,” published as a supplement to *IJP* in 2003, included a specific implant–host interface section. Four key additional areas for implant research

were highlighted: predictors of osseointegration, the natural history of implant failure, the application of bio-engineering principles in implant treatment, and the impact on patients of implant treatment. Jokstad et al's two points, implant material and study design, were also debated, making both publications a highly relevant framework within which we can place current research and future plans. This is invaluable material for debate about a better world of implant dentistry. However, we must be careful in our deliberations, since we admittedly lack a universal consensus on the most appropriate requirements for minimum clinical performance. But it would be unfortunate indeed if we ever lost sight of what common sense, clinical prudence, and, above all, professional integrity and scrupulous documentation have already yielded. Maybe it is time to acknowledge that the inherently robust healing potential of human bone is the major determinant of induced interfacial osteogenesis, and that morphological characteristics are a mainly commercial hype which threatens to usurp essential objectives of rigorously documented efficacy and long-term effectiveness. I suggest that it is opportune to revisit the proceedings from the 1998 Symposium “Towards Optimized Treatment Outcomes for Dental Implants” (*Int J Prosthodont* 1998;11[5]:385–521) and acknowledge the convergence of certainties which already exist. The effort will alleviate any lingering concerns in the context of an acknowledged appreciation for the diligence and rigor of the Jokstad et al paper and the accompanying responses. The colleagues involved in all these reports have enriched our understanding and appreciation of the nuances and complexities of clinical research. They have ensured that the boat of progress remains afloat and steadily sails on as planks continue to be replaced.

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