



Guest Editorial Where is Periodontology Heading?

The challenge of writing this editorial arose during the meeting of the Northeastern Society of Periodontists in New York City last fall. While listening to Dr Myron Nevins' inspiring lecture, "Providing Evidence for Clinical Practice and Achieving Excellence in Clinical Practice," a professional dilemma troubled me: Where is periodontology heading?

Several issues relating to our role as periodontists came to my mind, most of them in the form of open questions. The primary purpose of this editorial is to stimulate a critical analysis and foster a discussion on the future of the periodontal practice, including the delicate position of contemporary periodontology within the implant dentistry context. Are we moving away from our primary professional competencies to become implantologists? Is this a positive change?

Most periodontology meetings I have attended in the past years have heavily promoted implant placement techniques, state-of-the-art implant systems, and implant-related materials. Clearly, most continuing education activities within our field are largely focused on implant dentistry. Official sponsors and the scientific content of the most important international periodontal congresses indicate that the implant industry has significant influence on the programs offered. At Europerio 2006, 6 of the 10 platinum sponsors were implant manufacturers and 3 of the 8 main sessions dealt with implant therapy. At the 2007 American Academy of Periodontology Meeting, 56 of the 189 exhibitors were implant companies. A brief analysis of the AAP 2007 scientific program shows that while 8 sessions were dedicated to therapies to obtain and/or maintain a healthy periodontium and 8 more sessions focused on tissue engineering and regeneration, 15 entire sessions were devoted to implants. At that same meeting, 32 of 51 speakers and moderators who had disclosed their relationship with the industry had some connection to implants. Who is really determining the scientific programs at our meetings? Are we still in charge of these programs, or are we just dictated by our sponsors? Is it just me or is periodontology becoming synonymous with implant therapy?

According to the AAP, a periodontist is a dentist who "specializes in the prevention, diagnosis, and treatment of periodontal diseases and in the placement and maintenance of dental implants." How much time, effort, and financial resources are we dedicating to our primary obligation, to prevent and control periodontal diseases, ensuring lifelong maintenance of natural teeth? Is the care we provide to patients based on our periodontology training or are we seeing them solely through our "implantology eyes"?

While periodontitis is a relatively uncommon phenomenon during the first 20 to 30 years of teeth function,¹ peri-implantitis seems to be more prevalent than previously expected. A recent paper² reported that after 10 years of function without systematic supportive treatment, peri-implant lesions are common adjacent to titanium implants. How should we deal with this new, growing problem of disease? Who is going to treat peri-implantitis? Only periodontists have the training and experience to prevent and treat peri-implantitis at this time.

As periodontists, we are able to treat our patients by acknowledging the importance of prevention, early diagnosis, and early intervention for appropriate lifelong management of periodontal health. The same therapeutic approach, including systematic supportive treatment, must be delivered to implant patients, as current knowledge indicates that implant patients would benefit equally from those particular aspects of periodontal care. In addition, risk assessment should be performed in periodontal and implant patients. Factors like susceptibility to periodontitis, presence of different medical conditions, smoking, and the use of certain drugs are common risk factors for periodontal and implant treatment. Moreover, implant patients will benefit greatly if adequate levels of plaque control are established before implant placement, just as attaining high levels of oral hygiene prior to delivering periodontal treatment is essential for a positive outcome.

Patients, for the most part, have no concept of the lifetime commitment into which they have entered with their implants. They are rarely informed of the life span of implants or that consistently practicing adequate plaque control is a must. A landmark 30-year study³ showed that systematic maintenance care can prevent loss of periodontal support in periodontally treated patients, irrespective of age. For instance, 66- to 80-year-old patients lost only 0.7 teeth per subject over 30 years. These results show clearly that in individuals who were encouraged to maintain high standards of oral hygiene and received supportive care at need-related intervals, both the incidence of periodontal diseases as well as tooth mortality is practically nonexistent. There is also reason to believe that implant patients entering a similar supportive treatment program will benefit greatly over those who do not.

Although implant loss is the most frequent type of biological complication reported in implant therapy, other complications such as marginal bone loss, mucositis, and peri-implantitis may also occur. The incidence of biological complications at implant sites may be underestimated due to the lack of information on clinical findings obtained by, for example, probing the peri-implant mucosa, or on peri-implant bone loss in radiographs.⁴

The prognosis of implant treatment is often reported as survival rates, in which up to 95% has been reported. However, survival rates do not adequately describe the health of implant supporting tissues. While peri-implant mucositis describes a reversible lesion in the soft tissue, peri-implantitis includes not only the mucosa but also bone tissue and may compromise osseointegration.⁵ Peri-implantitis, if not successfully treated, may lead to complete disintegration and implant loss.⁶ The wide ranges reported for the prevalence of peri-implant mucositis (8% to 44%) and peri-implantitis (0 to 14.4%) may be partly due to differences in defining the two entities and different lengths of the studies cited,^{7,8} as peri-implantitis seems to be more common than previously expected. It is reasonable to anticipate that the frequency of peri-implant lesions will increase

as a result of increasing years of function and number of implants placed. The later in life implants are placed, the better the chance of a successful "life long" rehabilitation. In most cases, postponing implant placement is a benefit to patients. But what does success mean within the framework of implant dentistry? How can we define success in terms of periodontal therapy?

Implant success has been defined as a condition in which bone loss does not exceed 1.5 mm during the first year of function and is no greater than 0.2 mm each year thereafter.⁹ According to this criterion, a 3.5 mm loss of bone may be expected after 10 years of implant function. On the other hand, periodontal treatment success is defined as having no further loss of bone in periodontal care recipients. Therefore, the concept of success for implant therapy is quite different from its periodontal counterpart. This fact should be considered, especially when treatment plans involve periodontally compromised teeth.

Unquestionably, the advent of implant therapy was a tremendous breakthrough in restorative dentistry that has brought about reconstructive solutions never before conceived. Implant placement especially benefits patients who have had to live with rather unsatisfactory esthetic and functional solutions. The danger lies in the fact that implants are heavily promoted by the implant industry, as well as some periodontists and other specialists, as a miraculous solution to replace "hopeless" teeth. To date, no implant has proven to be better than a natural tooth. Thus, every nonextraction treatment possibility should be explored before extraction and implant placement is considered.

Today's periodontists must take advantage of the continuous and diversified advances in periodontal therapy, such as regenerative therapy, vaccination, immunoregulation, and community approaches to prevention. In our rush to adopt implant therapy as our own, we must not ignore these areas of research and practice, as their importance to both periodontology and implantology will surely grow.

This is a critical and exciting time in periodontology. As periodontists, we are urged to clarify where we stand within a professional arena apparently dominated by implant dentistry. The good news is that we have indeed become an extremely competent specialty. The knowledge and technology available today enables us to be better than the forefathers of periodontology. It is for us to decide how these professional tools are going to be used to benefit our patients. The shallow go-with-the-flow "practice limited to implantology" approach will surely deprive our patients of their right to choose what is best for their own health. A balanced approach between periodontology and implantology seems to be the best pathway for professional fulfillment, as well as for the reestablishment and maintenance of our patients' oral health.

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