



Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology

EDITORIAL

To implant, or not to implant: that is the question. . .

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At the recent annual meeting of the American Association of Endodontists it was obvious that the endodontic specialty is now seriously considering embracing implants as an alternative endodontic treatment modality. Courses, lectures, and exhibitions around the topic were abundant at this meeting, and no participant could miss that the traditional AAE meeting bag now was sponsored by an implant manufacturer. This shift has intensively engaged both friends and foes of implants, and among endodontists there is a serious debate ongoing. Some are concerned about an overall loss of livelihood; others are concerned about conflict of interest resulting in ethical lapses. There were also concerns about how a significant shift would affect the interaction with an all-important referral base in their local community.

The modern implant is an excellent treatment choice for edentulous areas where teeth have been lost due to caries, periodontal disease, or physical trauma. So, why have implants become such an issue of concern among many endodontists? It is easy to understand as many are exposed to the myopic treatment planning some practitioners, including academicians, are exposing their patients to today. The value of the natural tooth has diminished dramatically among some dentists, who no longer see themselves as a dentition-preserving health care provider but rather prefer to work with screws and nuts. Even minor concerns about the prognosis of a tooth needing endodontic treatment often lead to extraction followed by implant replacement. This action, under the best circumstances, is probably due to poor knowledge of the true survival rate of endodontically treated teeth. Under the worst circumstances, it is pure business. This is tragic, as we know that with the treatment options available today to an experienced endodontist there are very few structurally sound teeth that need to be removed.

We may have ourselves to blame, however, as there is great confusion in the endodontic as well as the

general dental community about how to judge the outcome of endodontic treatment. The classic criteria outlined by Strindberg half a century ago has served as the gold standard for most outcome studies.¹ The concepts of success and failure have in our new world of lowered personal responsibilities often been reclassified as “healed” and “diseased.” Thus, the operator’s responsibility for the treatment has been shifted to the patient’s lack of healing. This difference in semantics does not change the clearly defined endpoints, however. Such endpoints are essential for scientific studies, but they are less useful in daily practice and patient interaction. Here the symptom-free retention of function may be more important. In a recent study a broader concept of treatment outcome was suggested by classifying teeth without clinical signs and symptoms as “functional.”² With such classification an overall success rate of 85% could be restated as 95% “functional.” This number is well in line with the 97% retention rate recently reported in a large study of insurance data.³ It must be noted, however, that the overall success rate of 85% was the average of an 80% success of teeth with initial apical periodontitis and 93% for teeth without periapical disease. Thus, nearly all teeth with no periapical disease at time of treatment can be expected to be retained for a long time. What this study, like so many previous reports, makes very clear is that besides a rigorous antimicrobial treatment protocol, **early diagnosis of teeth requiring endodontic treatment, before periradicular disease develops, is critical for optimal outcome.** Thus, regular and careful pulp testing should be performed on all restored or carious teeth.

Teeth with apical periodontitis are at high risk for less favorable treatment outcome. In these cases we as endodontists must embrace the concept that we are treating an infectious disease instead of doing “a root canal.” There are clear examples in the literature where careful and thorough controlled disinfection can result in nearly 100% healing and function.^{4,5} Only by teach-

ing this rigor to our dental colleagues and practicing it ourselves will it be possible to change the increasing trend of extracting teeth with apical periodontitis in favor of an implant.

Implants add a great treatment option in hopeless endodontic cases, and there is no doubt that the endodontist should have single-tooth immediate implants in their treatment arsenal. The endodontist is well trained in surgical procedures and, in general, placement of an implant is easier than periradicular endodontic surgery.

In a recent randomized prospective study of immediate placement of implants in cases with apical periodontitis there was no difference in osseointegration compared to delayed implants.⁶ Furthermore, as the alveolar process is better preserved with an immediate compared to a delayed implant, larger diameter implants were more frequently used in these cases. Thus, it appears that there are no serious contraindications for direct implant placements in cases with apical periodontitis, which most likely will be the prime implant sites for the endodontist.

With the inclusion of implants as treatment options for the endodontist come ethical concerns. These are no different from the conflicts the implant-placing periodontist must face. In a recent article in the March issue of *Inside Dentistry* the statement was made: "implant surgery is actually easier to learn than a root canal, instead of trying to negotiate canals that are torturous and fill chambers with moldable materials, with dental

implants you are drilling a round hole with a round drill and filling it with a round implant." This is tempting simplicity. I have no concern, however, that the well-trained endodontist will try to preserve teeth over extractions. But it is also clear that the overall success of endodontic treatment will increase as complex and heroic endodontic surgery with dubious outcome now more successfully can be replaced by an implant.

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