

The Greatest Complication of All

Over the years we have come to recognize that there are many ways to achieve osseointegration. Although the early treatment protocols were quite rigid in describing the methods necessary to achieve success, ongoing research has demonstrated various alternative methods to achieve osseointegration that can be maintained over the long-term. Today, we take it for granted that almost every implant will survive for long periods of time, if not forever. Many of the research efforts performed demonstrate survival rates that are virtually identical to those of previous studies even though there are variations in healing time, material design, implant surface, loading protocols, etc. Current research appears to be dedicated to making the process go faster or to making the technical procedures easier. Both of these are laudable efforts.

However, another path exists for research: identifying complications in clinical performance. It is only through the identification of complications that research can be performed with the goal of eliminating them. In fact, I believe that the study and elimination of complications is the most fertile field in implant dentistry at this point in time.

If the last statement is true, then one should ask why this is not the primary area of investigation in implant dentistry today. Perhaps the answer lies in the ambiguous nature of the field of "complications." Indeed, complications are often subjective in nature, thereby making the quantification and qualification of complications a formidable task.

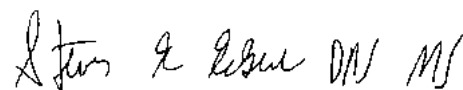
In my early years of osseointegration, I considered it to be a terrible calamity whenever an implant failed. Most patients agreed with this, but some looked at it very philosophically and accepted the failure as a minor speed bump in the road to improved prosthetic performance. Maybe that should not have been so surprising, because a number of our early patients had experienced previous failures with dental prostheses, some of which were supported by earlier generations of implants. Many of those individuals accepted the inevitable gradual deterioration of clinical performance over time, especially when early implant designs were used, as this was the expectation with previous fibrointegrated implants. Although I may have thought this ethically unacceptable, patients were often accepting of whatever benefit they gained during the functional lifespan of their subperiosteal or blade implants.

If loss of an implant is not the greatest complication, then perhaps the mechanical failure of an implant should be considered as such. When an implant frac-

tures in function it can no longer be relied upon to provide prosthetic support and must therefore be considered a failure. Beyond the fact that the implant failed is the notion that the implant now acts as a foreign body and must be surgically removed from the jaw. Furthermore, the residual components that are embedded in the jaw remain osseointegrated, and their removal can only be accomplished through the creation of a larger surgical defect. Surely this combination of failed implant and the need for surgical resection of the residual parts must qualify as a huge complication. My experience is that patients do consider this to be a major concern. Fortunately, the situation does not occur very often—less than 1% of all implants fracture and with improved understanding of biomechanics this number appears to be dropping—and even when it does, most patients seem willing to seek implant replacement once the site of the fractured implant has healed. So perhaps even the fractured implant does not represent the greatest complication of all.

Does this mean there is no "greatest complication"? To me the answer is clearly "no"! Instead it means that we have to understand who suffers the impact of the complication. Complications impact patients more than the clinicians who treat them. For the clinician, the complication is an event that needs to be rectified in one way or another, while for the patient, the complication brings an emotional reaction followed by the physical efforts involved in correcting the results of the complication.

At the end of the day, the greatest complication is the one that our patient perceives to be severe. This method of classifying complications is certainly not easy for clinicians to follow, as events traditionally categorized as minor in nature are considered by some patients to be adverse life-altering experiences. Conversely, the patient who experiences no negative reaction to what classically has been described as a major complication is the true judge of the severity of the complication toward their own well-being. Although our inability to qualify complications is not beneficial from a research standpoint, it is a recognition that our task is to satisfy the needs, physical and emotional, of the patient. Perhaps this brings the realization that "the greatest complication of all" is a failure to recognize the person who is ultimately affected by our treatment.



Steven E. Eckert, DDS, MS
Editor-in-Chief