EDITORIAL

Value in Dentistry

In the early to mid-1990s we started to hear rumblings about the need for evidence to direct clinical decisions. Evidence-based medicine (EBM) was already a standard within the medical community, but evidence-based dentistry (EBD) was in its infancy at that point. Those who embraced the concept thought that it was a way to make prudent decisions on behalf of patients, but others expressed concern that EBD would eliminate innovation on the part of the clinician. Thus started a rocky road toward acceptance of EBD.

One obvious problem with acceptance of EBD was that the level of evidence was simply not high enough to direct decisions on a daily basis. The first reaction to this situation was to call for better evidence. The earliest attempts to gain improved knowledge described a lack of definitive science and demanded a rigorous effort to elevate the "knowledge bar." Unfortunately this demand did not propel the science base far up the evidence hierarchy. Progress in this regard could be described as glacial. Contributions to the literature shifted from material and animal studies to case reports and case series, but the controlled clinical trials that could demonstrate clear differences among treatment alternatives remain largely unperformed.

The discipline of implant dentistry has been a good, but not perfect, contributor to the EBD movement. Although implant dentistry developed out of case reports, the era of osseointegration took a different path. Osseointegration, identified through a series of serendipitous events, underwent a series of clinical trials before it was introduced to the dental community at large. Clearly this approach demonstrated a path for EBD, but the next hurdle of comparative studies has yet to be cleared.

The problem is that the lack of response to the call for strong evidence seems to have created a schism among groups of well-meaning professionals. Today we have some groups claiming that the evidence demanders are standing in the way of progress, while those who seek evidence are stating, with equal vigor, that those who embrace anecdote are unable to discern the good from the bad.

Perhaps it is time to reconsider the concept of EBD with the goal of finding common ground. The first task may be to understand why EBD has not been universally embraced. After all, using proven methods that provide known outcomes seems like a good idea. Certainly there cannot be many individuals who prefer to work in intellectual darkness rather than doing things that have been substantiated. But here is the issue: Clinicians who reject EBD still use evidence in everything that they do. The difference is that the evidence they embrace is the evidence gained from experiences in their own practice rather than techniques reported in the literature. Realistically, because dental care does not result in life threatening complications and because failure is rarely immediate, clinicians using their own experiences as the best form of personal evidence may never know whether or not their therapeutic efforts are truly performing well.

The critical issue in dentistry is that there are many considerations in making treatment decisions. As the field is not one that considers mortality, study outcomes are often based on surrogates that may or may not reflect the factors that are most important to the patient. In implant dentistry, for example, implant survival may indicate success in an investigation. In a clinical situation, however, the survival of an implant is irrelevant if that implant is positioned in such a way as to prevent it from functioning as a supporter of a dental prosthesis. In such a case, reports of survival of the implant provide encouragement to the clinician, while the meaningful outcome of tooth replacement is not realized.

The water gets murkier when patient perception of success moves from factors that can be objectively evaluated to those that are more subjective in nature. Consider that patients seek care for 1 of 3 reasons: Patients look to restore function, comfort, and esthetics. Although all of these factors may be evaluated through some objective measures, none of them are independent from subjective assessment. Since the patient is the final judge of successful treatment, it is important for the clinician to identify how the patient values each of these treatment goals before treatment is initiated. This leads the discussion away from objective evidence and puts it instead into the arena of value.

Hence we now consider the issue of value-based dentistry (VBD) and must understand that the true goal is to assess the patient's perception of value derived from the care provided. Value may be a financial concern, as in a cost-benefit analysis, or it might be a moralistic concern in recognizing the value systems of the patient. The term *value* might

refer to the perception of results given the time spent in achieving them, or it could be a determination that can only be made over the course of time, with long-surviving restorations being considered favorable to those that succumb to inevitable breakdown at an earlier interval.

Substitution of VBD for EBD clearly recognizes the fact that the patient must be pleased with treatment. The clinician's perception of longevity, beauty, restored function, or any other outcome becomes secondary to the evaluation of these factors by the patient. What may be a clear choice for one patient may be an agonizing decision for another. It is this recognition that makes classic evidence, using surrogate outcomes, pale in comparison to patient perception of value.

None of this discussion suggests that we negate the progress that has been made in EBD. Instead, it recognizes that objective evidence alone cannot always predict the future for a dental restoration. It is only through the combination of objective and subjective concerns that the clinician can tap into the patient's perception of value-based dental care. Combining evidence into this value system creates a new concept of VBD that is more likely to find acceptance within the dental community.

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