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THE EDITOR'S CORNER

The Best Way to Treat

Evidence-based treatment is a concept that has been receiving growing support in orthodontics. It appears to have arisen out of dissatisfaction with the unscientific, seat-of-the-pants, this-worked-best-for-me approach in clinical practice. The premise is that a randomized, controlled study can provide reliable evidence of the best ways to treat malocclusions. This is an admirable goal.

Clinicians have always been engaged in the same quest—individually, in study groups, and with the significant contribution of the commercial orthodontic companies—albeit unscientifically, as charged. After completing a basic education in the specialty, orthodontists have practiced more or less what they learned, but have modified their techniques as improved technology and treatment methods, presented at orthodontic meetings and in orthodontic journals, offered the promise of a better way to perform certain procedures and therapies.

In spite of a natural human resistance to change, orthodontists have been fairly quick to adopt what they perceived to be better ways to treat. It could be described as a search for better treatment outcomes, since the clinical setting does not have the ingredients for research—no controls, no opportunity to repeat a particular course of treatment on the same patient, no possibility of prospective experimentation. This pragmatic approach has resulted in a variety of treatments that have produced results generally found to be satisfactory by orthodontists and patients alike. It might be called experience-based orthodontics.

But what is the best way to treat? Is it the way that produces the best occlusion? the best function? the best dental esthetics? the best facial esthetics? Is it the way that produces the most stable results? Is it the way that takes the shortest time? with the fewest office visits? at the lowest cost? Is it the way that doesn't require patient cooperation? Is it the way that contributes to the best oral health? This is not necessarily a compatible group of goals, although the best way to treat might incorporate them all. Moreover, there is the nagging question of

whether the best way to treat is to use group norms or to evaluate each prospective patient as an individual.

Those who advocate conducting research to provide evidence of the best way to treat malocclusions face a daunting task. The best way to treat would seem to begin with better ways, if not the best ways, to make a diagnosis. This may require a better grounding in muscle, bone, and nerve physiology, as well as genomics. Past data cannot be prologue, because if it were adequate, the truths we seek would have been known by now. After setting up such a study, it would take a minimum of 12-15 years to collect meaningful data, and the study would be open-ended after that. It would require sophisticated software, huge amounts of data, large numbers of personnel, and a great deal of money. If all that can be done, it seems likely that the researchers will find better ways to diagnose and treat each individual orthodontic patient.

Meanwhile, back at the office, practicing orthodontists are making decisions every day that relate to one or more or all of the desirable treatment goals listed above. One has only to look at the ways that orthodontic treatment is done today compared to 20 years ago or even 10 years ago to appreciate what has been accomplished in the pragmatic private office mode. However, after thousands of orthodontists have treated millions of malocclusions, we are still asking ourselves the same questions. We still read articles and attend lectures devoted to discussions of early vs. late treatment, extraction vs. nonextraction, expansion vs. nonexpansion, stability vs. instability, orthopedic vs. orthodontic, surgical-orthodontic vs. orthodontic, growth effects vs. treatment effects, and numerous other questions related to the specifics of orthodontic treatment.

Even if evidence-based research does not find the one best way to treat malocclusions, it is likely to turn up better ways, and that has always been the hallmark of our specialty. It remains to be seen whether evidence-based orthodontics will trump experience-based orthodontics, or whether there is one best way to treat every malocclusion.

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