Editorial Limitations of Evidence-Based Dentistry

Are we currently able to provide optimal results for our patients using evidence-based dentistry? Some esoteric therapies, such as construction of bone in the maxillary sinus, may be candidates for evidence-based decisions combining available information from consensus conferences and meta-analyses, but what about those that are delivered on a daily basis? How do we translate our present evidence base to benefit individual patients?

Let's consider the restoration of a maxillary molar. Can we compare the efficacy of an amalgam, a composite, a casting, and a pressed ceramic to determine which is most advantageous for a MOD restoration on a maxillary molar—or for any other tooth, for that matter? Do we have data to make such a simple assessment to guide clinical care?

What is the best form of tooth preparation for a maxillary central incisor? Which restorative material has emerged from a comparative investigation to be superior? What if the dental technician has limited experience with different restorative materials? Are certain materials more predictable for computed-aided design/computer-assisted manufacture procedures? When should an abscessed tooth receive endodontic treatment, and when would it provide a longer prognosis than an immediate implant?

Clinicians have to make these decisions every day. But do we have sufficient evidence to overrule clinical experience?

Unfortunately, there is a shortage of published randomized controlled trials (RCTs) that make direct comparisons to answer these important clinical questions. It does not seem likely that funding will be available in the near future to adequately pursue these questions with well-designed RCTs of adequate power. In addition, many published meta-analyses report on topics where inadequate data is available or an improper search methodology has been used.¹⁻⁵

It is time that the leaders of our professional societies consider the contemporary limitations of evidence-based dentistry. The challenge to improve the rigors of dental science should not allow us to believe that currently available data is adequate to guide our clinical choices via RCTs and meta-analyses. On the contrary, there are few topics in dentistry for which this data is available. We must strive to coalesce the available evidence from various tiers of publications and clinical expertise to guide our care for our patients, always striving for excellence.

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