

## Evidence-Based TMD Guidelines

The overall theme at the recent meeting of the International Association for Dental Research (IADR) was evidence-based diagnosis and treatment. Outcome assessment for all treatment, including treatment for TMD, requires the transfer of science from the research clinic or laboratory to the dental operator. In fact, the unfortunate schism between the academic community and the practicing dental community is largely related to a lack of transfer of science. The dichotomy continues to be one that is knowledge-based versus one that is procedure-based.

The current controversies in the diagnosis and treatment of TMD primarily involve conceptual differences between the collective historical beliefs and anecdotal testimonials of many clinicians and the collective body of scientific knowledge established by academic investigators. Appreciation for critical thinking, knowledge-based learning, and obligatory randomized clinical trials seems to threaten some practitioners whose procedure-based concepts might be contradicted by scientific investigation.

Unfortunately, many practitioners are not aware of the body of literature published in peer-reviewed journals or ignore such literature, or even worse, hold scientific data that contradict their own beliefs in disdain or contempt. The clinician seems to be saying, "How dare you (the scientific community) question my reported treatment successes" held so sacrosanct over the years. But no one claims that well-trained, conscientious practitioners are not successful. The question is, did the patient need that specific treatment or would some other, possibly less invasive, treatment have been just as successful.

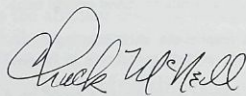
The summary statements of the NIH Technology Assessment Conference last May concluded that the natural history and etiology of many of the subsets of TMD are still not well understood, that many diagnostic tests are not reliable, and that valid treatment outcomes have yet to be established. Further, it was stated that since most TM disorders are self-limiting, or are recurrent and fluctuate over time, and since no one treatment has been proven more efficacious than another, treatment should be conservative, non-invasive, and reversible. These and similar statements appear to be inflammatory to some practitioners. Past beliefs and testimonials appear to be enough "proof" to support the procedural-driven "business as usual" approach to treatment.

One example of a time-honored concept supported by many clinicians is that there is one very specific position of the jaw or one ideal occlusal relationship that is essential for the successful treatment of TMD. There are a number of idealized occlusal concepts, many of which

substantially differ from a structural standpoint. Yet supporters of the various theories report near to, if not 100% success with their specific structurally idealized approach. The same is true with the 70% to 90% success rate reported for intraoral appliance (splint) treatment by various and quite disparate approaches. If one would stand back and in an unbiased way evaluate treatment outcomes for TMD, a precise ideal jaw or occlusal position or appliance design does not seem to be the common denominator for success; otherwise, universal success with very different approaches would not be the rule.

In fact, clinical trials do not support one type of TMD treatment over another, occlusal over nonocclusal, surgical over nonsurgical, or treatment over placebo. However, even though no specific treatment has been shown to be superior to another, studies have shown that invasive treatment is better than no treatment and multidisciplinary treatment is better than singular treatment. Clearly more clinical trials are necessary to substantiate the many treatment beliefs that have been held so dearly by all of us.

The AAOP should be extremely proud of the classification, assessment, and treatment guidelines published in the 1990s, but now it is necessary to establish evidence-based guidelines with treatment outcome data. The AAOP and other interested groups must work collectively to establish a universally accepted diagnostic classification. What is presently known about cause and effect must be published for the individual subsets of TMD. The reliability and validity of the various diagnostic tests must be presented, with the sensitivity and specificity for each indicated test cited. Finally, with the growing body of data resulting from vastly improved scientific studies, evidence-based outcomes can be published. There is no choice—the demand for evidence-based treatment is here. It is time for critical thinking, knowledge-based learning, and a patient-centered treatment approach to oral health care, including TMD. It is going to be difficult, time-consuming, and even distasteful at times. But I am confident that members of AAOP and other interested parties will be responsible enough to meet the challenge.



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