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Editorial

For the last ten years or more the term "evidence based dentistry" has become a familiar part of the vocabulary for most clinicians. There is a journal of Evidence-based Dentistry which effectively and usefully brings together published evidence and appropriate commentary of relevance to dental clinicians, and an oral health section in the Cochrane collaboration with a small but growing list of completed reviews. In a wider sense the term is used as an indicator of progressive and responsible clinical behaviour across all of medicine, and one to which clinical professionals should aspire. But, what does it really mean for prosthodontists and restorative dentists now, in 2005? Do we really practice EBD?

The concept that any clinician should have as his or her starting point a core of scientific evidence on which to base practice is sound, admirable and appropriate. It probably arose in large part from a history of blindly using dubious techniques and materials, coupled with an approach to medical education that was, at best, paternalistic. However, the concept that all clinical practice can be distilled down to a series of guidelines based entirely on evidence is as inappropriate as the concept that we should base our practice on scientific evidence is appropriate. Evidence based practice needs careful handling and interpretation, and is capable of misuse.

So, do we, or perhaps can we, practice in an evidence based way? I believe, and I hope, that we try, but in the eyes of the purist I suspect we often fail. We could ask ourselves whether the denture design we have just prescribed, or the decision to crown a tooth, or the choice of bridge abutment, really draws on hard, trial-based evidence, the sort of evidence that would pass muster in a Cochrane review. If we were honest the answer is probably no. But, before we engage in a bout of self flagellation it might be helpful to reflect on why this is.

There are probably two reasons. The first is that the evidence is often in short supply or of poor quality. The shortage of evidence is something that we can try to address but in restorative dentistry and prosthodontics there are real problems funding and running clinical trials. Outcomes are often very long term and statistical differences may not emerge for several years, by which time many of the trial participants will be lost to follow up, and new techniques and materials may have emerged. Systematic reviews are scarce in our area, for the same reasons. They are also expensive and few funding bodies are willing to invest in such an uncertain environment. Shortage of evidence we can do little about, but poor quality evidence is something that we can deal with. There is little point investing any effort into a trial unless it has a reasonable chance of being useful, and that is about appropriate design.

The second reason is perhaps a little more contentious, and that is that even where there is evidence from trials, or where this has been collected into a review, there is a risk of the data being misinterpreted and a wrong message being pedalled or understood. I recently found myself undertaking a procedure that was in direct contradiction of a Cochrane systematic review, with my full knowledge. After initial unease, I concluded that my treatment was appropriate, and continued. Why was that? I simply felt that the conclusion of the review, though not the methodology of the review, was flawed. There is a distinction between advising against a procedure because there is a lack of evidence to support it, and evidence that is not strong enough to make a decision of any kind. The latter may be because it is based on conceptually flawed, though perhaps beautifully designed trials. In the latter circumstances a decision has to be made in a different way, using informed clinical judgement, which I did. Such distinctions are subtle but very important for good practice.

This then leaves the question of how we can get better. Although clinical trials are expensive and thin on the ground, we can, when the opportunity arises at least try and design them properly. That usually means seeking help outside our own field, from experienced methodologists. Journals, like this one, also have a responsibility to only publish trials that are well designed. The availability and wide use of CONSORT guidelines[1] by authors when writing up trials, and the insistence on their use by editors should make a difference to the quality of trial evidence when we are lucky enough to have it. Clinicians should also be looking to link with those undertaking systematic reviews to ensure that the take home message is clinically appropriate.

Finally, if clinical trial evidence for our practices is always going to be in short supply, we should look to other, scientifically valid techniques for establishing best clinical practice. This may include the appropriate use of audit data or data on clinical practice from health providers, and the adoption of qualitative techniques using best methodology, linking with scientists expert in their use. In short, we need to be imaginative in the search for solutions to the evidence deficit but methodologically sound in our approach to addressing it.

Professor Jimmy Steele

References

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