Editorial

A plea for clinical trials—*belief* is not enough

Not surprisingly, the recent Guest Editorial by Karl Leinfelder,[1] "Acid etching of dentin: too early to recommend," provoked some passionate responses—more will likely follow on this issue.

The topics of how best to treat newly prepared dentinal surfaces and whether or not to etch dentin with acid have been evoking polarizing viewpoints for some years. It was not so long ago that the commonly held *belief* was that applying acid to freshly cut dentin would surely lead to irreversible pulpal reactions. Early studies in this regard were held up as "evidence" and we believed. The data in these studies, as it was pointed out by Kanca,[2] were perhaps misinterpreted.

The topic of how best to treat dentinal surfaces during operative dentistry is of interest to practicing dentists throughout the world. At this time of transition, it is highly appropriate to stimulate debate as Leinfelder has done. The acceptance or rejection of new techniques by the practicing profession is the issue here. The crux of the argument is this: at what point can we say that the evidence is adequate for general acceptance and use of a new technique on patients? In the Letters to the Editor section of this issue, Fusayama, Bertolotti, and Kanca take Leinfelder to task for not accepting the etching of dentin based on their experiences and beliefs. Duke, on the other hand, applauds Leinfelder's stand. Why the differing opinions?

We are all, to some extent, victims of our own training, experiences, and biases. Clinicians and researchers differ as to the need for clinical experiences or clinical trials. As Duke points out, the need for clinical trials is the essence of this discussion. Without such trials, we can argue forever based on inconclusive laboratory studies and anecdotal reports from the field. For example, a clinical trial with a control group may well have put to rest the belief in the use of calcium hydroxide liners long ago. There is growing acceptance for the view of Charles Cox, that calcium hydroxide liners serve little or no purpose in restorative dentistry.[3]

Clinicals trials, therefore, are crucial steps in the acceptance and recommendation of new techniques. Without clinical trials we are simply believing, and that is not good enough for human subject treatment. I applaud and thank all concerned for their willingness to freely express their opinions.

The following short story aptly illustrates the basic problem expressed in the Guest Editorial[1] and Letters to the Editor. The only reference I could find for the following anecdote was Peacock, 1972. If anyone is aware of a more complete reference, I would appreciate being so informed.

> One day when I was a junior student, a very important surgeon visited the school and delivered a great treatise on a large number of patients who had undergone successful operations for vascular reconstruction. At the end of the lecture, a young student at the back of the room timidly asked, "Do you have any controls?"
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> Well, the great man drew himself up to his full height, hit the desk, and said, "Do you mean did I not operate on half of the patients?" The hall grew very quiet then.
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> The voice at the back of the room hesitantly replied, "Yes, that's what I had in mind." Then the visitor's fist really came down as he thundered, "Of course not. That would have doomed half of them to their death."
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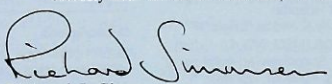
> It was absolutely silent then, and one could scarcely hear the small voice ask, "Which half?"



Richard J. Simonsen
Editor-in-Chief

1. Leinfelder K: Acid etching of dentin: too early to recommend. *Quintessence Int* 1992;23:229.
2. Kanca J: An alternative hypothesis to the cause of pulpal inflammation in teeth treated with phosphoric acid on the dentin. *Quintessence Int* 1990;21:83–86.
3. Cox C, Bergenholtz G, Heys DR, et al: Pulp capping of dental pulp mechanically exposed to oral microflora: a 1–2 year observation of wound healing in the monkey. *J Oral Pathol* 1985;14:156–168.