The “etch-and-rinse” and “self-etch” camps

Dear Reader,

Every adhesive dentistry fanatic is familiar with the two bonding approaches that can be used today to bond to enamel and dentin. Both the “etch-and-rinse” (E&R) and the “self-etch” (SE) approach have potential, despite a scientifically documented product dependency; both obviously also have their limitations, in particular with regard to the long-term bonding performance. Clinicians definitely have their favorite bonding technique and may have different reasons to “believe” why their selected bonding routine is better than the alternative. Hopefully, some sound scientific rationale, read in our journal or other dental literature, has helped clinicians to select the “perfect” adhesive from the plethora of commercial adhesives for routine clinical practice.

The dental industry has responded well to this apparent rivalry between two bonding routines and launched so-called universal adhesives, which basically allow the practicing dentist to decide him/herself which adhesive application protocol to use. Although sceptically eyed by some as “old wine in new bottles”, these universal adhesives combine E&R and SE adhesive technology into one adhesive, which was previously thought impossible. Moreover, an important advantage is that using just one single product may allow the practitioner to follow a different adhesive route adapted for the specific clinical need.

Nevertheless, reading recent literature, it is very striking that two camps seem to exist: the “E&R” and the “SE” camp. We are intentionally omitting a specific reference; those readers who feel addressed will immediately get the message. A recent literature review on bond-degradation pathways and strategies to improve bond durability should have covered both adhesive approaches, and certainly not have ignored the approach of the opposing “camp”. Furthermore, the review paper repeats much of what has already been written in papers and reviews on the same subject, includes only some minor statements referring to the other approach, while the major strategies to prolong bond durability with the alternative approach did not even seem worth mentioning. It would have been acceptable if the paper’s title and objectives had mentioned that only one of the bonding approaches was discussed. The respective “camp” seems to insist on writing in this manner, since at least one similar paper was published before. Apparently, the peer-review system failed in this case, by allowing a paper that basically only reviewed half of the dental adhesion literature on strategies to improve bond durability to be published (fortunately not in the Journal of Adhesive Dentistry). Or did the reviewers coincidentally belong to the same “camp” and were biased? There is nothing wrong with preferring one of the two adhesive approaches, but this does not mean that literature regarding the alternative approach should be ignored. It would definitely have been better to cover the entire body of literature concerning both bonding approaches, criticize using sound, scientifically supported arguments, and attempt to weigh the pros and cons of both approaches.

Another critical point is the selection of adhesives used in experiments, as they form the basis for new adhesive protocols, for instance, to prolong bond durability. Relatively consistent laboratory results and long-term clinical data have revealed gold-standard adhesives for both bonding approaches. It is not clear to us why such adhesives are not more consistently used in experiments as true controls.

While we as researchers and clinicians should all aim for better adhesive performance, competition should NOT exist between the two “camps”. Both the E&R and SE approach have their potential and limitations; in research we should always strive for improved bonding performance, irrespective of the approach itself.

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