

# Editorial

## Move over amalgam—at last

There comes a time when routine clinical techniques must be changed based on new technology, clinical research, new materials and/or advances in techniques and procedures. To fail to move forward as a result of laziness or to resist moving forward, based on habit or tradition, or simply out of fear of change, is contrary to the profession's responsibility to the public. Such a time for change is now for a standard clinical operative procedure for treatment of untreated carious lesions—the use of dental amalgam.

It has been three decades since the first foray into the amalgam replacement experiment. Initially it certainly was an experiment. Resin composite materials, first marketed in the 1960s, without—then later in the 1970s with—the benefit of the acid-etch technique, were proposed as successors to amalgam. Many dentists used some of the original materials such as Adident 12, Concise, and Adaptic for posterior restorations—with disappointing results if the acid-etch technique was not used. A decade later, in 1976 as I recall, we were led to believe that the demise of amalgam was just around the corner by the marketing slogan, "Amalgam move over, Profile is here." Well, Profile *was* here, but now neither it, nor the company that marketed it, exists! Almost 20 years and several material generations later, amalgam is still the most-used posterior restorative material.

Amalgam has withstood attack from many fronts. Guru lecturers of the past predicted the death of amalgam "five years from now" for the past two decades. Some Canadian researchers, armed with their study on sheep, ably supported by the sensation-hungry print and television media, launched all out war on "mercury fillings"—the result was that an American Dental Association survey of 1,000 adults found that 48% believed that they could be harmed systemically by dental amalgam restorations. In Europe, the Swedish media hit hard at the purported ill effects of amalgam restorations. But the scientific community, quoting hard science, successfully argued that the evidence for systemic harm in humans from amalgam restorations, apart from those few allergic to mercury, is unproven at this time—so amalgam lives on.

Many clinical studies have been performed on new generations of "posterior composite" in the past

decade. Basically they conclude that wear is no longer a problem and that if used within the constraints of the clinical technique, several excellent resin composite materials can be successfully used for high-quality restorations in posterior teeth. Certain factors, such as the increased difficulty of the clinical procedure, and with it the higher cost of placing resin composite compared to amalgam due to the longer time needed to carry out the procedure, have led to the continued use of amalgam.

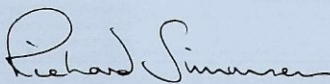
But the time has come to declare that:

- Amalgam should never be used as a first-time restorative material.
- Amalgam should never be used as a restorative material in pediatric dentistry.

Why? Because better alternatives are available.

The great strides that have been made by several manufacturers in the development of excellent resin composite materials, and the landmark development of the Mitra-technology for resin-modified glass-ionomer materials, have given the profession better alternatives than dental amalgam for untreated carious lesions in adults, and for all situations where amalgam may have been used in the past in pediatric dentistry. It may be argued that amalgam is still useful as a replacement for itself, but as a restorative treatment for caries, amalgam should be abandoned for several reasons. The most important reason, in my mind, is the ability to carry out far more conservative cavity preparations with the bonded, and better, alternative materials, be they resin composite or resin-modified glass-ionomer materials.

The experiment is over. While materials will continue to improve, now is the time to say, move over amalgam—at last.



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