

bond will be subjected to forces when the restoration is placed, finished and polished. Initial bond strength measurements should therefore be carried out at a maximum of 10 minutes. In a study of 50 publications on dentine bond strength measurements, there was found to be little standardization of test methods and a number of potentially significant variables were either not recorded or not reported.¹⁰ These inconsistencies and deficiencies only serve to confuse the untrained reader, who is searching for the truth within the research data.

When choosing a dentine-bonding system for his or her practice, the practitioner should ask the questions listed in Table 1. In addition, he or she should bear in mind the following criteria for satisfactory clinical performance of a dentine-bonding system:

- the restoration(s) should be retained in place for a significant time;
- the bonding system should prevent ingress of fluids and micro-organisms at the restoration

margin(s) (the implication that there will be no pulpal irritation if the restoration is completed sealed is accepted).

More general questions relating to dental materials that the practitioner should ask are presented in Table 2.

CONCLUSION

The ability to find and correctly interpret the information presented by advertisers and manufacturers is an essential aspect of good clinical practice – blind acceptance of claims made by advertisers may lead to the disappointment of poor clinical performance. All manufacturers should be able to substantiate any of the claims made in their advertising and clinicians must be able to appraise the data with which they are presented scientifically, including information presented by dental sales representatives.

REFERENCES

1. Cooley RL, Tseng EY, Barkmeier WW. Dental

bond strengths and microleakage of a 4-META adhesive to amalgam and composite resin. *Quintess Int* 1991; **22**: 979–983.

2. Burke FJT, Liebler M, Eliades G *et al*. Ease of use versus clinical effectiveness of restorative materials. *Quintess Int* 2001; **32**: 239–242.
3. McLean E, Burke FJT, Wilson NHF. Criteria for disposable brush tips for use in dentistry. *J Adhesive Dent* 2000; **2**: 151–154.
4. Turchi CS, Albiston J, Stewart R. Removal of mercury from dental amalgam waste water. *J Dent Res* 2000; **79**: 545 (Abstr. 3213).
5. Forsten L. Short- and long-term fluoride release from glass ionomers and other fluoride-containing filling materials *in vitro*. *Scand J Dent Res* 1990; **98**: 410–416.
6. Mjör IA. Glass ionomer cement restorations and secondary caries: A preliminary report. *Quintess Int* 1996; **27**: 171–174.
7. Randall RC, Vrijhoef MA, Wilson NHF. Efficacy of preformed metal crowns vs. amalgam restorations in primary molars: A systematic review. *J Am Dent Assoc* 2000; **131**: 337–343.
8. Burke FJT, Cheung SW, Mjör IA, Wilson NHF. Restoration longevity and analysis of reasons for the placement and replacement of restorations provided by vocational dental practitioners and their trainers in the United Kingdom. *Quintess Int* 1999; **30**: 234–242.
9. Aboush Y, Torabzadeh H. Fluoride release from tooth-colored restorative materials: A 12-month report. *J Can Dent Assoc* 1998; **64**: 561–564.
10. Al-Salehi SK, Burke FJT. Methods used in dentin bonding tests: An analysis of 50 investigations on bond strength. *Quintess Int* 1997; **28**: 717–723.

ABSTRACTS

ARE YOU SURE THE CALCIUM HYDROXIDE STAYS IN THE ROOT CANAL?

Calcium Hydroxide Retention in Wide Root Canals with Flaring Apices. Z. Metzger, M. Solomonov and E. Mass. *Dental Traumatology* 2001; **17**: 86–92.

Calcium hydroxide is used in routine endodontic practice to complete the disinfection of the root canal system. However, it is also used in teeth with wide root canals and open apices to induce apexification. It is possible for the material to be resorbed in such situations, and this study compared different methods of placement on both the retention of the material, and also the detection of voids.

The workers made two significant findings of considerable interest to general practitioners. First, that if a thick mix of calcium hydroxide is condensed

into the canal it is better retained than when applied with a lentulo spiral filler, or as a commercial injected paste. Second, and perhaps more importantly, they found that the inclusion of barium sulphate, traditionally added to improve detection of voids, actually masked the fact that much of the calcium hydroxide dressing had disappeared. The use of barium sulphate should be discouraged in endodontic dressings.

IS YOUR TREATMENT OF SENSITIVE TEETH AS SUCCESSFUL AS THIS?

Clinical Evaluation of Prime & Bond 2.1 for Treating Cervical Dentine Hypersensitivity. E.J. Swift, K.N. May and S. Mitchell. *American Journal of Dentistry* 2001; **14**: 13–16.

Cervical sensitivity can be an irritating problem to both the patient and the dentist, and many different treatments have been suggested over the years,

varying from simple applications of fluoride to laser therapy. In this study, 22 premolars and anterior teeth with exposed cervical dentine and sensitivity to cold stimulation were selected for treatment under fairly strict criteria. A single application of Prime and Bond 2.1 (Dentsply, Weybridge, Surrey) was applied to the tooth and light cured. This is a 'one-bottle' acetone-based adhesive. The teeth were tested for sensitivity with compressed air and cold stimulus immediately after application, and at varying periods up to 24 weeks.

The patients reported a significant reduction in sensitivity which remained significant at 24 weeks after treatment. Although the research protocol excluded certain categories of patients, the results would certainly encourage practitioners to include this treatment in their armamentarium for this annoying condition.

Peter Carrotte
Glasgow Dental School