FEATURES SECTION

Letters to the Editor

Dear Editor

The study 'Long-term clinical evaluation of bracket failure with a self-etching primer: a randomized controlled trial' by Phil Banks and Badri Thiruvenkatachari[1] is well standardized to report on the assessment of the relative survival of bonds. The results of the study can be extrapolated to indicate that there is no significant difference between the bracket failure rates bonded with either Transbond Plus self-etching primer (SEP) or Transbond XT primer. This serves to negate the belief that the brackets bonded with SEP experience higher failure rates because of their formulation. We thoroughly appreciate the study in that the results obtained will influence the vast number of clinicians to use SEP systems, which could be more doctor-friendly. However, we wish to add here that the results could have been of further clinical relevance if the recordings of the first-time failed brackets were specified at the time the brackets failed, instead of collectively reporting the results over the full observation period. This methodology could have been more appropriate to identify any statistical significance between the failure rates using different primers at different points of time. This variable remains undetermined in many relevant research protocols, because the emphasis is on number of bonds lost within a certain time frame.

Another point for clarification relates to the time at which the levelling wires were ligated to the brackets. Were the wires ligated immediately after bonding or later? The analysis of this combined with initial bond failure could add another dimension to the assessment. We understand that this not within the scope of present study but are curious to know.

Arunachalam Sivakumar, Sumit Gandhi, Ashima Valiathan

Reference

1. Banks P, Thiruvenkatachari V. Long-term clinical evaluation of bracket failure with a self-etching primer: a randomized controlled trial. *J Orthod* 2007; **34:** 243–51.

Dear Editor

We would like to thank Dr Sivakumar, Dr Gandhi and Dr Valiathan for their kind comments and interest in our paper. We also feel that the results will increase the evidence available to clinicians on the subject. From our own perspective, we now routinely use the SEP system in our clinics with good reliability and better patient and operator acceptance.

With regard to the first question, the main aim of this study was to look at bracket failure rates over the whole treatment period which would be most relevant to the orthodontist (previous studies mainly investigated the first six or twelve months after bracket placement). We did not aim to investigate bracket failure rates at different times during treatment as we felt that this would reduce robustness by increasing the number of statistical tests with a risk of false positives and would reduce the power of the study.

To answer the second point raised, the initial archwires were ligated immediately after bracket placement in all cases.

Phil Banks, Badri Thiruvenkatachari

Dear Editor

I read with interest the article by Banks and Thiruvenkatachari,[1] the commentary on it by Professor Eliades,[2] and your editorial upon the conclusions from another study upon the same subject,[3] namely SEP as an alternative to conventional acid etching in bonding. The conclusions that can be drawn from these highly scientific studies are clear and simple – there is no significant difference between the two methods. However, I feel that it should be emphasized that these studies only apply to a specific aspect of bonding, that of the *non-molar* teeth. The majority of my patients are adults and in most cases I bond *all erupted teeth* including third molars from the start of treatment. Whilst it is possible to isolate all of the non-molar teeth at once for bonding with either method, this is certainly not possible with molar teeth. Thus, when using SEP there is a very significant time saving and a much more pleasant patient experience as each quadrant of molars can be isolated and bonded separately. To achieve the same outcome with acid etching requires up to four (if isolation is challenging) separate etches and rinses. This would negate the time advantage gained from avoiding prophylaxis mentioned by Professor Eliades.

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(Incidentally, why is there such a lot of interest in avoiding prophylaxis? Apart from in patients at risk from bacteraemia it is harmless and it only takes a few seconds!)

I find SEP much easier and quicker for re-bonding brackets as there is no irrigation, aspiration or application of sealant required before applying adhesive to the bracket. My assistant can begin applying adhesive to the bracket straight after giving me the SEP and as a result a bond failure causes less stress and time delay. Most importantly, its ease and simplicity make the elective repositioning of brackets, which is required at some stage in most treatments, much easier.

I would suggest that in the case of randomized clinical trials on clinical procedures, at the planning stage they should be subject to the observations of clinical orthodontists from outside the research team who use each of the techniques in question. Their input might improve the study design and increase the clinical value of the outcome. The observation of a declining interest of researchers in SEP[2] strikes me as premature – other important questions regarding its use, namely its efficiency in bonding posterior teeth and rebonding brackets have perhaps not yet been answered. This would be research of great clinical relevance.

Peter Huntley

References

1. Banks P, Thiruvenkatachari V. Long-term clinical evaluation of bracket failure with a self-etching primer: a randomized controlled trial. *J Orthod* 2007; **34:** 243–51.
2. Eliades T. Commentary. Long-term clinical evaluation of bracket failure with a self-etching primer: a randomized controlled trial. *J Orthod* 2007; **34:** 233.
3. Luther F. Award winning papers. So what? *J Orthod* 2007; **34:** 209–23.

Dear Editor

Thank you for forwarding to me the letter from Dr Huntley, who raised some interesting points regarding the use of SEP for bonding molar teeth. We did not investigate this in our study as we wished to compare our results with previous papers which all excluded molars. I agree that a separate trial looking at molar bonding would be valuable.

We previously investigated molar tubes bonded with Rely-A-Bond adhesive with higher than expected failure rates (over 33%),[1] but a subsequent audit comparing first molar Speed tubes bonded with conventional etch and with Transbond Plus SEP, produced first time failure rates of 9.7 and 10.8% respectively.[2] My colleagues and I now use SEP routinely and agree that the ease and effectiveness in molar bonding is one of its greatest benefits. I would like to thank Dr Huntley for his interest in our paper.

Phil Banks

References

1. Banks P, Macfarlane TV. Bonded versus banded first molar attachments: a randomized controlled clinical trial. *J Orthod* 2007; **34:** 128–36.
2. Banks P. Bonded first molar tube failure rates. *British Orthodontic Society Clinical Effectiveness Bulletin* 2006; **19:** 18.