Reviewer's report

Title: A Randomised Controlled Trial to Explore Attitudes to Routine Scale and Polish and Compare Manual Versus Ultrasonic Scaling

Version: 1 Date: 13 May 2005

Reviewer: Luiz Andre Pimenta

Reviewer's report:

General
This pilot trial investigated patients' and vocational dental practitioners' (VDP) attitudes towards scale and polish procedures by using either manual or ultrasonic techniques. Also the benefits, costs and the experience of both patients and professionals were reported.

This study was conducted by means of self-administered questionnaires which were answered either for patients or for VDPs.

The literature is clear that periodontal therapies aimed at altering the progression of inflammatory periodontal diseases must include meticulous supra and subgingival mechanical debridement during the treatment as the basis of most anti-infective therapy (J Clin Periodontol. 2004 Dec;31(12):1070-6; J Clin Periodontol. 2005 Apr;32(4):406-11). Based on current evidence in the literature, it is now known that endotoxin is a weakly adherent surface phenomenon and that sonic and ultrasonic instruments can be used to accomplish definitive root detoxification and maximal wound healing without overinstrumentation of root and without extensive cementum removal (Clin Prev Dent. 1989 Jul-Aug;11(4):7-11).

The results of this Pilot trial demonstrated that the majority of the patients confirm the importance of the scale and polish procedure, since they affirmed that these procedures were beneficial.

Ultrasonic scalers may have advantages because of the activity associated with ultrasonics can result in removal of root surface plaques, since the ability to flush the pocket during subgingival instrumentation can enhance pocket depth reduction and gain in clinical attachment beyond that achieved with manual scaling. Furthermore, the constant flushing activity of the water or chemical solutions used to cool the tips results in disruption of the unattached and weakly attached subgingival plaques (J Clin Periodontol. 1996 Mar;23(3 Pt 2):263-7).

Although this study reports some degree of discomfort when undergoing an ultrasonic scaling, no statistically significant difference was observed when compared to the manual one. Also the results demonstrated that VDPs showed a preference for using ultrasonic scalers for periodontal treatment, which would be expected.

1. Is the question posed by the authors new and well defined?
   Yes
2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?
   No, they need more details.
3. Are the data sound and well controlled?
   Yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Yes
5. Are the discussion and conclusions well balanced and adequately supported by the data?
   The discussion needs to be improved regarding to the costs.
6. Do the title and abstract accurately convey what has been found?
   Yes
Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Regarding to the treatment costs, the method of this study is particularly related with the region where the study was conducted, since the Oral Health System in Scotland is different compared to another countries. Although the results demonstrated that the majority of patients were unaware of the price paid for individual items of the treatment, this finding could be related with the Health System used in Scotland and it could be added to the discussion. The author should discuss Public Health and Private Systems and this issued could improve the quality of the paper.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

- The authors should clarify the participation of the General Dental Practices involved in this study, only 28 Vocational Dental Practitioners was directly involved.
- The authors have to standardize VDP. In the first sentence of the Abstract they should use “vocational dental practitioners” instead “dental vocational practitioners”, consequently the abbreviation should be VDP or DVP.
- Page 4 – line 17 – and Page 5 line 3 – The authors have to standardize “general dental practitioner vocational training” or “general practitioner vocational training” and use an adequate abbreviation. Actually it should be necessary to double check all the abbreviations.
- In the Methods, the authors should describe what means “simple scale”. Although the authors have demonstrated the power calculation of the experiment there are some concerns about the age range of the patients, it seems to be too big.

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests