

Technique Tips – Non-surgical Management of Deep Periodontal Pockets – Avoid the Scalpel!

Severe periodontitis affects 10–15% of the adult population of industrialized countries. The two main modifiable risk factors in this susceptible group are smoking and plaque control. Thus the key to patients' successful long-term management is for them to quit smoking permanently and significantly improve both their supra-gingival and sub-gingival daily plaque removal. This is far more important for long-term periodontal stability than attending for repeated appointments of scaling and/or prophylaxis.

Compliant dexterous patients will have the ability to improve their plaque control but the majority of this is affected supra-gingivally and equi-gingivally. The modified Bass and other sulcular brushing techniques only allow for penetration of brush bristles to approximately 1 millimetre sub-gingivally.¹ This still enables maintenance of an undisturbed mature plaque biofilm below that level. For these deeper areas, sub-gingival debridement is recommended with the primary aim of removing root deposits and disturbing that mature biofilm. The disturbed root surface biofilm, however, quickly re-establishes unless patients are able to remove this regularly using mechanical methods. Otherwise, deeper periodontal pockets will soon be re-colonized by pathogenic bacteria and, after a short hiatus, the periodontitis is likely to progress.

Conventional wisdom recommends periodontal surgery for residual deep pockets after initial root surface debridement. This is broadly regenerative or resective in its approach. The primary aim of this surgery is, however, to create shallow periodontal pockets, which the patient is able clean on a daily basis with or without regenerating the periodontal attachment, respectively.

However, surgical periodontal treatment is not acceptable to many patients and, in addition, it is not available to the majority of patients, especially via an NHS pathway. Indeed, there are only 305 registered specialist periodontists in the UK,



Figure 1. A Tandex Solo interspace brush (CTS dental supplies) used to remove subgingival plaque mechanically. This can reach up to 10 mm below the gingival crest and the patient should be encouraged to create blanching of the gingival tissues. This is most valuable on the buccal and palatal aspects of teeth along the gingival margins.



Figure 3. A narrower Tepe® interdental (TePe Oral Hygiene Products Ltd) bottlebrush used to clean a deep localized periodontal pocket. This can reach up to 12 mm below the gingival crest and patients should be advised that this will feel uncomfortable and will elicit bleeding for up to two weeks.

many of whom are part-time and/or work independently of the NHS.²

Fortunately, there are alternative practical management options for deeper periodontal pockets which may reduce or remove the need for surgical therapy. The scientific literature illustrates that treated periodontal patients with a bleeding score of less than 20% of sites have a significantly reduced risk of periodontal deterioration.³ In addition, the continuing absence of bleeding from a periodontal pocket is an excellent predictor of periodontal stability, with more than 98% of sites showing a lack of progressing periodontitis, with a mean follow up of 2–2.5 years.⁴

Thus modified methods for mechanical cleaning, which allow patients to



Figure 2. A correctly sized Tepe® interdental (TePe Oral Hygiene Products Ltd) bottlebrush used to clean proximally. Patients should be advised to use the largest bottlebrush that they can get through a space to allow the bristles to penetrate subgingivally. This can be used on both anterior and posterior teeth.



Figure 4. A correctly used length of floss. Note that the patient has placed the floss well below the tip of the papilla. The patient has also been advised to use a vertical motion on either side of the papilla and not a backwards-forwards motion.

maintain a low overall bleeding score, and no bleeding from deeper sub-gingival pockets may negate the requirement for surgery. Figures 1–4 illustrate four common methods of mechanical sub-gingival cleaning.

References

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