BY HAFEEZ AHMED

Full Circle

SUCCESS TO FAILURE IN 18 MONTHS

Introduction

Patient compliance is fundamental to successful treatment outcomes.[1,2] Therefore, it may be argued, the degree to which a patient complies with oral hygiene instruction is of more importance than the choice of any particular treatment method.

Context

A 44-year-old fit and healthy patient was referred in 2007. In the letter of referral her dentist described a 'recalcitrant' situation. He offered insight and a warning that five years earlier he had completed a course of cause-related periodontal therapy followed by a course of corrective periodontal therapy. The response to treatment had been good but despite perfect patient compliance and ongoing supportive periodontal therapy (SPT) there had been a complete relapse and the deterioration had become aggressive (Figs.1,2,3).

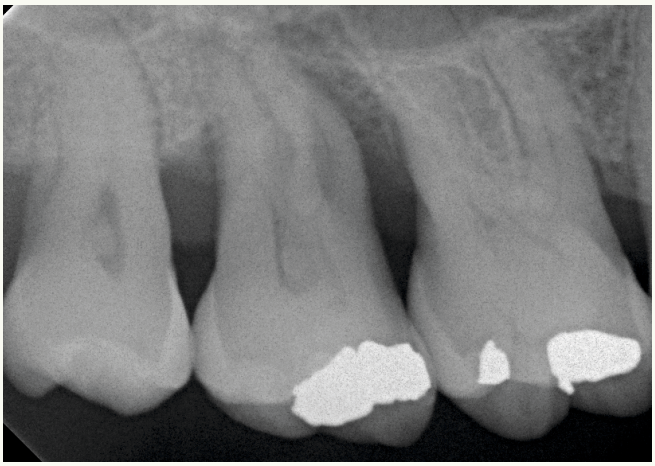


Figure 1: The root surfaces of 18, 17 and 16 are smooth. Tooth 17 has 70-80% bone loss.

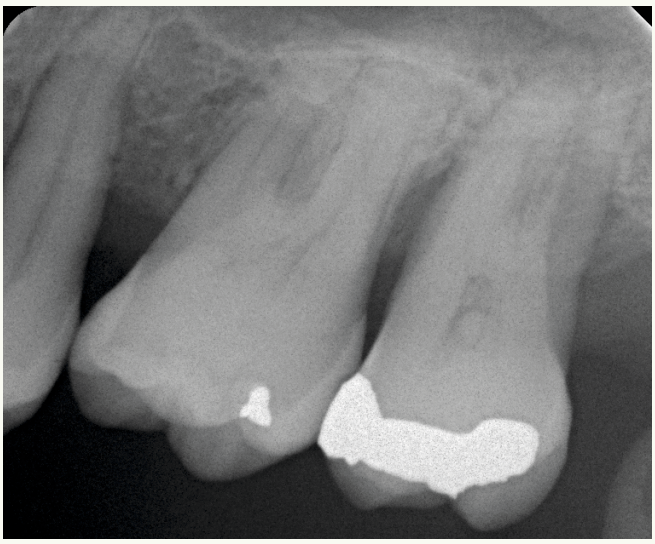


Figure 2: The root surfaces teeth 25, 26 and 27 are smooth. Tooth 27 has 60-70% bone loss.

The examination revealed plaque free teeth with no hard deposit anywhere. On gentle stimulation with a probe the crevicular bleeding was noted to be between 80-90%. The periodontal pockets were generally elevated above 3mm and between 5-9mm at mesial and distal sites in all sextants with minimal buccal recession. The bleeding on probing was between 60-70%. Most teeth demonstrated mobility between grades 1-2. Teeth 21 & 22 had drifted buccally and gaps had opened up between them.

Diagnosis

A diagnosis of advanced active chronic generalised adult periodontitis with bone loss up to 80% around some teeth was made (stage iv as per the current EFP S3 level clinical practice guideline)[3]

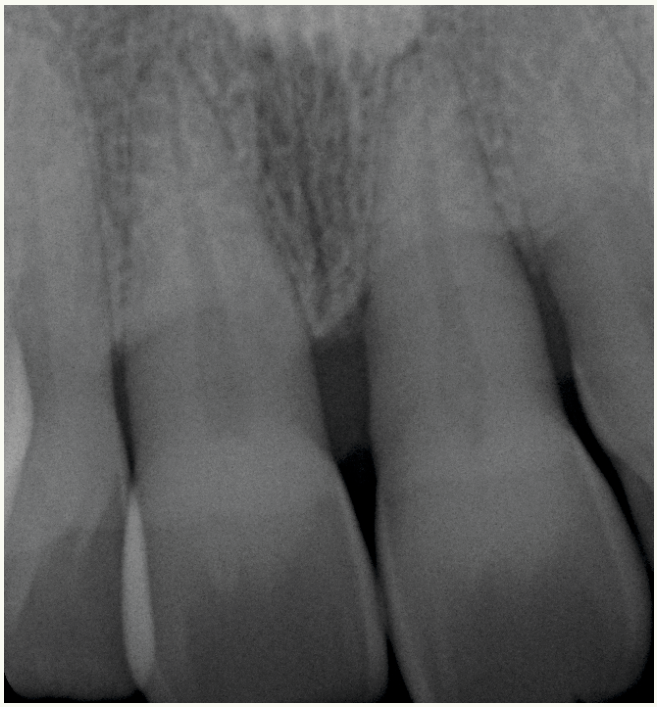
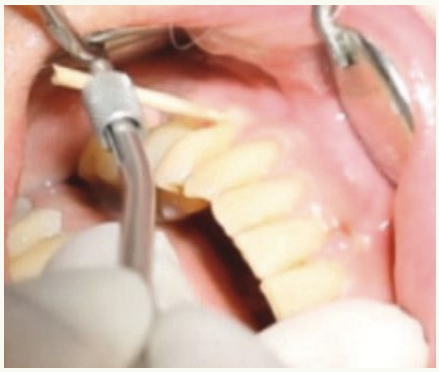
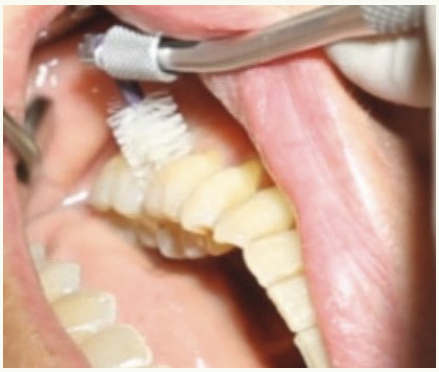
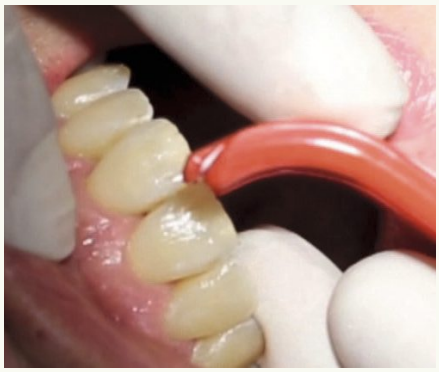


Figure 3: The root surfaces of 21 and 22 are smooth with 30-50% bone loss.

Figures 4,5,6: **The sequence of treatment during SPT**

Treatment in brief

As the root surfaces were free of deposit the treatment was revised and broadly divided into[3,4]:

1. Cause related therapy and oral hygiene advice
2. Surgical debridement of all pockets above 3mm and oral hygiene advice
3. Extraction of tooth 17 & 27 and oral hygiene advice
4. Review and revise
5. Orthodontic therapy specific oral hygiene advice
6. Review and revise
7. Maintenance therapy specific oral hygiene advice

Phase 2 and 3 of the treatment plan was completed in February 2008. It was performed as a full mouth approach in two treatment sessions over two consecutive days. During it, the actual bone loss was found to be far more advanced than had been anticipated from the radiographs. At the end of treatment, whilst sutures were being placed, it was impossible not to notice that the teeth were significantly looser than at the beginning. Sutures were removed after 10 days and SPT was provided once a month for the following three months.

At reassessment, in June 2008, the examination revealed a plaque score below 20% at the dento-gingival margin. The gingivae did not bleed when they were gently stimulated with a probe and bleeding on probing was reduced to below 20%. Periodontal pockets had been reduced to below 2mm and elevated pockets had been completely eliminated. All teeth demonstrated mobility between grades 1-2.

Phase 5, the orthodontic therapy, commenced in September 2008, and during this time SPT was provided at monthly intervals. Orthodontic therapy was completed with the fitting of removable retainers in August 2009. The patient chose removable retainers despite a strong recommendation for fixed ones.

Maintenance Therapy

Maintenance commenced with homecare being supplemented with SPT at three monthly intervals, within 18 months of the treatment being completed. Despite best efforts, there had been a complete relapse: >80% gingival bleeding; > 70% bleeding on probing; > 5-7mm periodontal pocketing.

Throughout each appointment, the patient had been receptive and polite in her disposition. We agreed that her presentation was odd, and that her susceptibility was extraordinarily high. In around 2012, I made a strong recommendation to repeat phase 2 of the treatment. The patient responded with: *"Could I try doing the homecare like I was supposed to be doing?"*

We agreed to a period of intensified SPT at monthly intervals during which the patient promised to actually do the homecare she had been telling me she had been doing all along! After six months SPT was shifted to two-monthly intervals, and after a further six months it was shifted to three-monthly intervals.

Intensified Supportive Periodontal Therapy

Each SPT session was provided as follows, to the same methodical format:

- Patient rinsed with chlorohexidine mouthwash for 60 seconds. She was happy to do comply and understood that it was not for any periodontal benefit but as part of a surgery hygiene protocol.
- The biofilm was disrupted on each tooth 1-2mm into the gingival crevice using a round-tip wood stick in a holder. The patient was reluctant to do this at home as it made her feel as if she was stuck using a weapon from the stone age!
- Posterior interdental surfaces were mechanically cleaned using an interdental brush. The patient was reluctant to do this at home as she had previously hurt herself doing it.
- All interdental surfaces were flossed using a Floss&Co flossing device. This became the patient's preferred method. She found it much easier than wrapping floss around her fingers and preferred it over the single-use disposable floss picks for a host of reasons – primarily, ease of use and less plastic waste.
- Hard deposit removed very gently using universal scaler. An LM 23 Scaler (LM 313-314 XSi) was the one of choice.

Outcome

The patient has continued an uninterrupted treatment plan since she first presented in 2007 and continues to attend at intervals between 1-3 months for SPT. Remarkably, over a 17-year period she has not lost any additional teeth (although

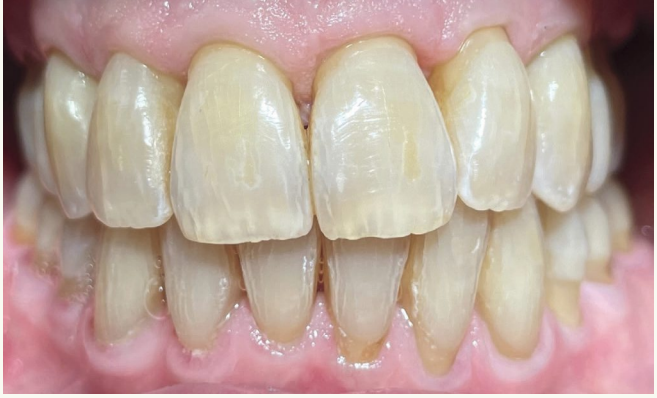


Figure 7: **Photograph of smile taken in 2025**

tooth 25 has been grade 3 mobile for about four years. She has agreed to its removal, but this has not yet happened).

The photograph above (Fig.7) was taken in 2025. We are in open agreement that her homecare has not changed significantly since we first met and that the vague control that we have over her periodontal condition is almost entirely reliant on the SPT.

Reflection

Over a 30-year career, in my experience, the standards of plaque control required for successful management is rarely achieved in patients who present with advanced periodontitis. Motivation alone is not enough and re-motivation on a regular basis is key for longer-term success[5,6] Whilst the psychological behavioural interventions[7] designed to motivate patients to improve oral hygiene were conceived with the best intentions, they never really change baseline behaviours – people rarely change!

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