Beautician’s confidence boosted

Dr Matthew Holyoak describes a quick, cost-effective and minimally invasive treatment, using Heraeus Venus composite restorative, to improve a patient’s smile for a new career where appearances matter.

A 20-year-old female presented requesting an improved smile with which to start her new career as a beautician. She told Dr Holyoak she wanted “Brighter teeth that show more when I smile”. The patient had already considered and ruled out maxillofacial surgery and fixed appliance therapy when younger. She was looking for a quick and effective solution.

Basic periodontal screening showed inadequate gingival health, with several fast bleeding sites in the upper and lower arches. There was a lot of reformed calculus, lingually in the lower teeth as well as on the buccal surfaces of the upper molars. Tooth mobility was physiological and there was no evidence of bruxing. Bitewing radiographs showed no interproximal caries and normal horizontal bone levels.

More significantly, the initial examination revealed an anterior open bite and less than ideal width-length ratios. According to Dr Holyoak, “The central incisors had a ratio of 8.8mm/10.5mm (83 per cent), which is at the boundary of the acceptable proportions (75-85 per cent). The anterior occlusal plane was slanted and the embrasures needed improving. Increasing the length of the upper centrals would improve the proportions and give the patient a more balanced smile”.

Aesthetic Assessment Criteria:

- Anterior tooth display at rest
- Midline & cant
- Width: length ratio centrals
- Dominance
- Buccal corridor
- Anterior occlusal plane
- Lip line
- Embrasures
- Tooth form
- Gingival heights & zeniths
- Axial inclination
An oral hygiene session removed the root surface debris, and more effective brushing technique restored the patient’s oral health. One week later, there was a big improvement in gingival condition, with a greatly reduced bleeding index.

The restorative options considered with the patient included: i) no treatment, ii) indirect restorations and iii) bleaching followed by direct composite restorations. The goal was to restore balanced, natural-looking central incisors and increase tooth display. The treatment would also correct the slanted anterior occlusal plane and improve the embrasure pattern, to reduce the aggressive harsh appearance of upper canines.

Dr Holyoak recommended the following treatment plan: Tray bleaching and direct freehand composite build-up with no preparation of the existing teeth (upper 3-3, and lower 3-3).

The bleaching system recommended is, in Matthew’s opinion, more predictable than powerbleaching. The method uses 10 per cent carbamide peroxide and opalescence gel over two weeks. The trays were fabricated without reservoirs.

According to Dr Holyoak: “A minimally invasive treatment was chosen because the non-preparation technique is very low risk and no local anaesthetic is required. In this case I preferred freehand assessment and clinical judgement, rather than a 3D wax up, using silicon indexes to guide the build up.”

There was a two-week delay prior to commencement of the adhesive bonding procedures, with direct freehand build using SB1 Heraeus Venus enamel. Matthew explains: “Venus composite was used for the restorations, because of the material’s handling characteristics and shade selection. It has chameleon-like qualities of simple build up, rather than complex stratification which I felt was not required in this case”. The teeth were prepared using 38 per cent acid-etch prior to bonding. A rubber dam was used to isolate the areas to be treated, prevent contamination with moisture and protect the patient’s airway.

Restorations placed included incisally upper-right 12, upper left 12 and incisally lower 2-2. Mesial-incisal restorations were added to upper right 3 and upper left 3. The composite restorative shades were selected by Dr Holyoak to match the post-bleaching result. Pre-bleaching, the shades were A2 upper 2-2 and A3 canines. After bleaching the shades were B1 or brighter.

Dr Holyoak describes how: “The anterior tooth display and tooth form were improved, the uneven incisal edges were removed and the upper canines were made less aggressive. The dominance of the central incisors was re-established and the slanted anterior occlusal plane was corrected. The different upper anterior gingival levels were acceptable because of the low lip line. The midline, cant and axial inclinations were not issues in this case”.

The treatment was undertaken mainly during two appointments: 90 minutes for the upper 3-3, with a review next day to refine, and a 30 minute
appointment for direct restoration of the incisal edges of the lower 2-2 with Venus SB1. Polishing and a final review were undertaken one week later. The bleeding indexes were zero and the periodontal [probing depths] were normal.

This patient now has a job where she feels appearance is very important. Matthew Holyoak concludes: “It was immediately clear from the way she smiled that she was pleased with the results. She said her confidence had been boosted by the restorative treatment and she was more comfortable dealing with her own customers wanting beauty therapy”.

Reflecting on the case, Dr Holyoak feels, “it was a cost-effective solution, which was biologically minimally invasive. It avoided an expensive treatment cycle, so often involved in indirect restorations, especially important in such a ‘young’ patient.” One year later there was no incidence of debonding or chipping to the minimally restored incisal edges. New bleaching trays have been made so the patient can maintain brighter teeth from time to time.