

# Patient happy to avoid braces

**Tariq Bashir** describes how he achieved a natural result with a layered composite technique to close diastemata



**Figure 1:** The patient was unhappy with the spaces between his upper central and lateral incisors



**Figure 2:** It was possible to close the diastemata with composite bonding



**Figure 3:** The UL1 had incurred a small incisal edge chip and could also be repaired with composite bonding

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A 30-year-old male attended Visage Clinic because he was unhappy with the spaces between his upper central and lateral incisors (Figure 1). He also wanted his teeth whitened. The patient had been thinking about orthodontic treatment to close the gaps, and after a recommendation, had decided to consult with us.

## Orthodontics avoided

An examination was carried out and I advised the patient that, although it was an option, orthodontics could be avoided. It was possible to close the diastemata with composite bonding (Figure 2). Due to previous trauma, the UL1 had incurred a small incisal edge chip that could be repaired with the same material (Figure 3).

Once I had explained what composite bonding entailed, the patient was relieved to discover that he did not require orthodontic treatment, as he was not keen on wearing braces.

**Although it was an option, orthodontics could be avoided. It was possible to close the diastemata with composite bonding**

Pre-treatment photographs were taken. Two weeks prior to the restorative appointment, the patient's teeth were whitened. Boutique tooth whitening gel with 10% carbamide peroxide was used over 14 days, with custom-made trays produced by Visage Dental Laboratory. At the same time, the technician waxed up the ideal length of the lateral incisor edges.

## Natural blend with surrounding teeth

Kulzer Venus Pearl nanohybrid composite was chosen to restore the teeth. I have been using Venus Pearl for over six years for all my anterior and posterior composite cases. It has great polishability and was the perfect material to blend with the teeth due to its chameleon-like characteristics and easy handling. The Venus Pearl shades Amber (AM), Clear Light (CL), B1, and Opaque Light Chromatic (OLC) were selected.

A stent of the palatal surfaces of the wax-up was constructed, using a silicone putty material. The putty stent was cut along the incisal edges and used to aid the palatal shell build-up. This technique allowed me to layer the composite, to make the restorations look as natural as possible.

Minimal preparation of the incisal edges of the UR2, UL1, and UL2 was completed with a fine preparation bur and any sharp edges were smoothed with Sof-Lex discs. The upper arch was isolated using rubber dam, which



**Figure 4:** The mesial aspects were built out and into shape with Venus Pearl B1 composite



**Figure 5:** The Kulzer Venus Supra polishing kit was used to give a final natural sheen



**Figure 6:** The patient was very happy with the outcome



**Figure 7:** The patient couldn't believe the difference that composite restorations and whitening had made to his smile

was secured with clamps on the upper first premolars. Floss ties were used on the anterior teeth. The margins were etched with 37% phosphoric acid etch gel. A two-bottle total-etch bond was then applied to these surfaces and air dried, before light curing for 20 seconds.

## Layered technique

The palatal shells of the incisal edges of the UR2, UL1, and UL2 were built up using Venus Pearl AM. The mesial aspects of the laterals were restored using the posterior matrix.

**Post-treatment photographs were taken at the one-week review appointment. The patient was very happy with the outcome**

The interdental spaces between the incisors were closed using Venus Pearl B1 shade. The mesial surfaces were roughened with a diamond strip. A posterior sectional matrix was placed along their length and adapted against the palatal aspects of the tooth. The surfaces were etched with 37% phosphoric acid etch gel and the enamel was bonded.

The mesial aspects were built out and into shape with Venus Pearl B1 composite (Figure 4) and cured. The Mylar Pull technique was used to finalise the shape of the centrals. The composite was brushed into position using a No.2 brush with wetting resin and light cured in accordance with the manufacturer's instructions. The missing dentine layers were rebuilt with OLC dentine shade, with a thin layer of CL at the incisal area in between the mamelons, to mimic the natural tooth anatomy. Finally, B1 shade was placed as the enamel layer.

## Natural smile

The composite restorations were smoothed and polished with fine burs, followed by Sof-Lex discs of decreasing coarseness. The Kulzer Venus Supra polishing kit was used to give a final natural sheen (Figure 5).

The kit has just two grades of polishing points, so is time-saving and simple to use. The finish was achieved with a fine goat hair wheel and aluminium oxide paste. The occlusion was checked in all movements during the chewing pattern. No interferences were found.

Post-treatment photographs were taken at the one-week review appointment. The patient was very happy with the outcome (Figure 6). He couldn't believe the difference that composite restorations and whitening had made to his smile (Figure 7). The patient had been dreading braces, but a successful result was achieved without them. **D**