

Diastema closure case

In this case, the patient was overwhelmed by the two-hour transformation, says **Dev Patel**

A male patient in his late 40s complained that he didn't like the space between his front teeth (Figures 1 and 2). He also had visible cervical abrasion lesions and discoloured fillings (Figures 3-6). He wanted to ensure his smile looked clean and natural again for his daughter's wedding.

Treatment options

All the treatment discussed involved replacing the carious fillings with layered composite. In terms of the diastema between the centrals, the patient had three options. The first involved braces to close the space, which would take a few months and would be relatively expensive. Porcelain veneers could be placed over the central incisors, but this would involve some preparation of the teeth. The third option was to add composite to the mesial surfaces of the two teeth, closing the gap without any destruction of healthy tooth enamel.

The patient chose the final option on the



Figures 1 and 2: A male patient in his late 40s complained that he didn't like the space between his front teeth.



Figures 3-6: He also had visible cervical abrasion lesions and discoloured fillings.



Figure 7: Venus pearl clear light provided translucency at the incisal edges.



Figure 8: The patient was overwhelmed and very happy to have his new smile in just two hours.

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basis that it was minimally invasive, cheaper and quick. His daughter's wedding was only three weeks away and he wanted to be able to smile confidently in the photographs.

Preparation

All the caries and discoloured restorations were removed with a fast hand piece. The margins were starburst bevelled to ensure that minimal composite/tooth interface was visible. The cavities and enamel surfaces were etched with micro-abrasion. Selective etching was then carried out with phosphoric acid for 30 seconds over enamel and 15 seconds over dentine.

A total-etch adhesive was used to bond the restorations (over one minute per stage to ensure

enough time for the primer and bond to infiltrate the tubules). The surfaces were then gently air dried before light curing for 30 seconds.

Restoration

I chose Heraeus Kulzer Venus pearl composite for this case because of its excellent consistency, great polishability and ease of use. The opaque light chromatic shade was used to replace cavities into dentine, followed by the A1 enamel shade.

The Clark matrix system was employed to treat the diastema cavities between the central incisors, with interproximator or wooden wedges and an injection moulding technique. Venus pearl clear light provided translucency at the incisal edges (Figure 7). Any excess was removed and the restorations were polished initially with a coarse disc. Rubber polishing points were then used to ensure correct light angles. An aluminium oxide diamond polishing paste was applied with a goat hair brush to create the final lustre.

Final result

Being hyper-critical of my own work, it might have been possible to further improve the line angles on the centrals. However, the patient was overwhelmed and very happy to have his new smile in just two hours (Figure 8). **VD**

Dr Dev Patel

BDS PGDip has a special interest in aesthetic and cosmetic dentistry. He has completed numerous national and international postgraduate courses, enabling him to deliver the highest quality dentistry for all his patients. Dev is an associate dentist at Parrock Street Dental and Implant Centre in Gravesend, Kent. He is also the co-founder of Dental Circle - the UK's fastest growing dental professional networking site (www.dentalcircle.com).



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