



Aesthetic challenges overcome with composite restorations

Dr Claire O'Connor describes treating a young man with white spot lesions and gapped, uneven teeth to deliver a minimally invasive, highly aesthetic outcome

A seventeen-year-old male came to see me at Bantry Dental. He was unhappy with the gaps between his upper central incisors, the uneven tooth edges and white spot lesions (Figures 1 to 3). He wanted to enhance the shape and appearance of his teeth by having the gaps closed and the blemishes concealed.

A thorough examination was carried out. The patient had good oral health. The examination revealed an upper lip tie, which is often associated with a maxillary median diastema. ICON resin infiltration, composite bonding, ceramic veneers and orthodontics, or a combination of each, were potential treatment choices for the patient to consider. He was not keen on orthodontics. Instead, he elected to have composite bonding to the upper dentition, as this method addressed all his concerns and was a more economical option than ceramic veneers. Teeth whitening was not an option as the young man was under eighteen.

Case planning

Due to the age of the patient, an additive approach was taken to camouflage the white spot lesions. The challenge of this case would be to cover the spots without removing tooth structure and, at the same time, avoid making the incisors appear too bulky (Figure 4).

On the day of treatment, a rubber dam was applied to isolate the teeth. Each tooth was cleaned by air abrasion (Figure 5) with the Velopex AquaCare system. A 37 per cent phosphoric acid etch gel was applied to prepare the enamel surfaces, which were then washed and dried. A clear contoured matrix was placed, and adjacent teeth were protected against the bonding agent using Teflon tape. The bonding adhesive was applied and light-cured in accordance with the manufacturer's instructions.

Confidence in predictable results

The composite chosen for this case was Kulzer Venus® Pearl. The

material exhibits exceptionally reliable physical and aesthetic properties. It does not stick to the instruments or result in air bubbles. Bubbling can appear as porosities on the surface of the completed restoration, and may accumulate stains, compromising the aesthetic outcome. In contrast, Venus Pearl delivers highly predictable results, providing confidence for tackling aesthetically challenging cases (Figure 6). B1 shade was selected, applied to each tooth from upper canine to canine in a layered technique, and sculpted to the desired shape. The rubber dam was removed and occlusal checks were carried out, followed by an initial polish using coarse and medium discs and finishing points (Figure 7). The patient was very happy to approve the aesthetic result created.

Minimally invasive treatment

Three weeks later, the patient returned for a review. The final polish was carried out with fine discs followed by a goat hair brush. The clinical outcome from my perspective was excellent, with the choice of composite producing a highly predictable result. The patient was also delighted with his new smile. The treatment took just four hours to complete over three appointments (Figures 8 to 10). Local anaesthetic was avoided, and there was no need to prepare the teeth with drilling so the procedure can be reversed if necessary.



THE CLINICAL OUTCOME FROM MY PERSPECTIVE WAS EXCELLENT ... THE PATIENT WAS DELIGHTED





Fig 1 The patient was unhappy with the gaps between his upper central incisors, the uneven tooth edges and white spot lesions



Fig 2



Fig 3

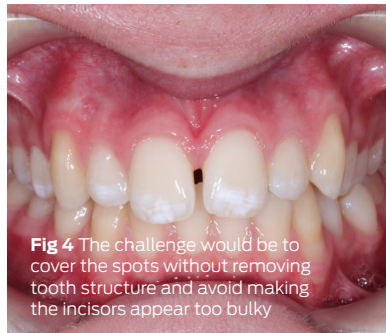


Fig 4 The challenge would be to cover the spots without removing tooth structure and avoid making the incisors appear too bulky



Fig 5 Each tooth was cleaned by air abrasion



Fig 6 Venus Pearl delivers highly predictable results, providing confidence for tackling aesthetically challenging cases



Fig 7 Occlusal checks were carried out, followed by an initial polish



Fig 8 The patient was delighted with his new smile which took just four hours to complete over three appointments



Fig 9



Fig 10

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Dr Claire O'Connor is the principal dentist at Bantry Dental. She has developed expertise in the highly specialised areas of biomimetics, adult orthodontics, cosmetic dentistry and anti-wrinkle treatments. She is currently completing a year-long mastership in Biomimetic Dentistry. Claire is a member of the Irish Dental Association, the Royal College of Surgeons in Ireland and the Irish Academy of Aesthetic Dentistry. Dr O'Connor graduated with honours from University College Cork in 2006 and completed her MFD examinations with the Royal College of Surgeons in Ireland in 2010.



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