

Clinical

Teenager happy with natural, durable restorations

Dr Nishan Dixit describes a case where submerged primary molars were restored using a simple technique with Venus Pearl composite

A 17-year-old male patient presented with submerged lower primary second molars (Figure 1). The teeth were out of occlusion, sitting low in centric (Figures 2 and 3). They were asymptomatic, although the patient was unhappy with their appearance and wanted them to be corrected. The patient had a clear medical history and good oral hygiene; however, his past dental attendance had been irregular.

A general examination revealed caries in both upper first molars and the presence of partially erupted upper and lower third molars on the right side. Kulzer Venus Pearl composite, A3 shade was used to restore the upper first molars using a total-etch technique, adhesive and layered protocol.

The partially erupted wisdom teeth were to be kept under observation, as there was no relevant signs or symptoms associated with them.

The patient was adamant that he didn't want orthodontic intervention and wanted to avoid invasive dental work, so he chose to have the lower primary second molars built up with composite

Non-invasive treatment

A range of treatment options for the submerged teeth was discussed. The patient was offered referral to a specialist orthodontist to be assessed and treated. When he was older, the teeth could be extracted and replaced with a Maryland bridge or dental implants.

Until he was ready to have definitive treatment, a temporary denture could be considered, or the teeth built up with composite, to maintain the spaces.



Figure 1: A 17-year-old male patient presented with submerged lower primary second molars



Figure 2



Figure 3

Figures 2 and 3: The teeth were out of occlusion, sitting low in centric



Figure 4: After casting a model from the impression, a transparent stent of the diagnostics was fabricated



Figure 5



Figure 6

Figures 5 and 6: The composite in the stent was bonded onto both of the submerged teeth

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I was also keen to avoid invasive methods and prefer to offer composite restorations when the clinical situation allows.

Simple composite restoration

A diagnostic wax-up of the proposed outcome was created. This was shown and explained to the patient, who then gave consent to treatment. An impression was taken with Kulzer Xantasil. Xantasil is a single-mix, medium body alternative to alginate and produces impressions with excellent detail, which set within 90 seconds. After

casting a model from the impression, a transparent stent of the diagnostics was fabricated (Figure 4).

Polytetrafluoroethylene tape was used to isolate the adjacent teeth. The submerged teeth were then etched with 37% phosphoric acid and bonded, using a total-etch technique in accordance with the manufacturer's instructions. Venus Pearl composite, A3 shade was

Clinical



Figure 7



Figure 8

Figures 7 and 8: The patient's occlusion was carefully checked in all excursions



Figure 9



Figure 10



Figure 11



Figure 12

Figures 9-12: The patient is pleased that he has natural-looking teeth in place of almost completely submerged primary molars

placed into the stent. A single shade was used, as the aesthetic properties of Venus Pearl worked well as a monochromatic restoration in this instance.

The stent was transferred into the mouth and the composite in the stent was bonded onto both of the submerged teeth (Figures 5 and 6). After curing, the composite restorations were polished using the Kulzer Venus Supra polishing kit and the margins were finished with a fine flame-shaped bur. The patient's occlusion was carefully checked in all excursions (Figures 7 and 8). A balanced occlusion helps to minimise undue forces on the composite.

Superior handling properties

I have used the Venus range of composites exclusively for a number of years, due to their superior handling properties and outstanding results. For this case, I chose to use Venus Pearl. It gives high aesthetic outcomes, providing excellent colour adaptation, wear resistance and a natural finish.

This simple technique has proved to be **successful and long lasting**. The restored molars have been in function for seven years

The material employs the same tricyclodecane urethane dimethacrylate resin as Venus Diamond, which is totally unique to Kulzer. Compared with earlier technologies, the cured composite is more flexible under stress and more durable over time.

Natural, long-lasting result

This simple technique has proved to be successful and long lasting. The restored molars have been in function for seven years. There was no disruption to other teeth and if the composite build-ups fail or fall off, they can be replaced, or other restorative options considered. The

longevity of the treatment has proved beneficial to the patient, as he does not regularly attend the practice and has returned to live in Ireland.

The patient was very happy with the non-invasive, straightforward approach. He is pleased that he has natural-looking teeth in place of almost completely submerged primary molars (Figures 9-12), and that they continue to serve him well seven years later. **D**



Dr Nishan Dixit BDS (Lond) LDS RCS (Eng) is the principal dentist at Blue Court Dental, Harrow, and has a special interest in cosmetic dentistry. He particularly enjoys helping patients to enhance their smiles by improving their dental health, function and aesthetics. His work also involves preventive and general dental care, including complex dental rehabilitation treatment. He has undertaken numerous courses in both the UK and abroad. Nishan is currently scientific director of the British Academy of Cosmetic Dentistry.