

A quick and simple method to aesthetically repair a failing posterior Class II cavity



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CASE STUDY

A 45 year old female patient presented for an examination where a failing composite restoration on a second premolar was identified on radiographs.

The patient also complained sensitivity to sweet food. Patient would like to have an aesthetic restoration hence, Aura (SDI Ltd.) composite system was chosen as the ideal product to use.

All of the teeth, even the unrestored 1st premolar, showed signs of occlusal stress, exhibited by multiple enamel lamellae. These did not mean that the tooth had to be cut away to remove them. Placing a well bonded composite will help improve the biomechanical functioning of the tooth.

DIAGNOSIS & TREATMENT

Failed composite restoration. The colour of the enamel in the tooth matched Aura E1 shade. (Fig 1)

Following removal of the decay, the enamel margins were bevelled, the tooth air abraded, a V3 matrix and V3 ring were placed. (Fig 2)

A self-etching bonding system was to be used, hence, to ensure good bond to the enamel, the enamel margins were selectively etched for 15 seconds. Washed & dried. (Fig 3)

A self-etch primer was scrubbed into the dentine for 20 seconds, air dried, the bonding resin applied and cured. (Fig 4)

A radio-opaque flowable such as Wave (SDI Ltd.) was placed over dentin and cavo margins to a thickness of 0.5mm. This layer should be considered a part of the dentin hybridization process rather than restoration build up. (Fig 5)



Fig 1. Failed composite restoration.



Fig 2. Following removal of the decay.



Fig 3. A self-etching bonding system was to be used.



Fig 4. A self-etch primer was scrubbed into the dentine for 20 seconds.



Fig 5. A radio-opaque flowable such as Wave (SDI Ltd.) was placed.

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DIAGNOSIS & TREATMENT

The interproximal wall was incrementally built up with Aura E1 shade. This was achieved by placing a thin layer, then sectioning it vertically to prevent C-Factor shrinkage stresses damaging bonds to the axial wall margins. (**Fig 6**)

Then a 1.5mm dentine layer using Aura DC4 was placed. This was then sectioned along the fissure pattern to effectively create multiple increments to help control C-Factor shrinkage stresses. (**Fig 7**)

A dark brown tint was placed in the depths of the dentine fissure pattern. (**Fig 8**)

Aura E1 shade was then used to create the palatal enamel and contoured to fissure pattern. (**Fig 9a**)

Buccal enamel was then replaced with Aura E1, contoured to fissure pattern. (**Fig 9b**)

Completed case. Good match between enamel and the Aura E1 enamel shade. Margins match really well. (**Fig 10**)



Fig 6. The interproximal wall was incrementally built up.



Fig 9a. Aura E1 shade was then used to create the palatal enamel.



Fig 7. Then a 1.5mm dentine layer using Aura DC4 was placed.



Fig 9b. Buccal enamel was then replaced with Aura E1.



Fig 8. A dark brown tint was placed in the depths of the dentine.



Fig 10. Completed case.