Esthetic replacement of anterior class IV restorations

By Dr. Paulo Monteiro, Portugal

Initial Situation
Female patient 30 years old. Patient was not satisfied with current anterior restorations (maxillary central incisors). Patient also expressed dissatisfaction with shade and surface texture.

Challenge
Creating smooth and natural-looking restorations for patients who demand the highest level of esthetics can be challenging. Using materials that mimic shade and opacity of dentin and enamel is critical.

Fig. 1: Initial situation: patient was not satisfied with current restorations.

Fig. 2: Teeth were etched after preparation using Single Bond Universal Etchant.

Fig. 3: Single Bond Universal Adhesive is scrubbed into the surface, air dried and light cured with Elipar™ DeepCure-S LED Curing Light.

Fig. 4: A silicone matrix was used to create the palatal wall with Filtek™ 2500XT Universal Restorative, shade CT.

Fig. 5: The interproximal enamel layer was built with Filtek™ 350XT Universal Restorative, shade A3E and light cured with Elipar™ DeepCure-S LED Curing Light. For the incisal halo, Filtek™ Z350XT Flowable Restorative, shade W was used.

Fig. 6: Application of the dentin layer using Filtek™ Z350XT Universal Restorative, shade A1D. For volume control the Misura instrument (LM Arte by Style Italiano) was used to leave a 0.5mm space for the facial enamel.

Fig. 7: Creation of mamelons and application of a small portion of Filtek™ 2500XT Universal Restorative, shade CT between the dentin layer and incisal halo to enhance translucency at the incisal edge.

Fig. 8: The final enamel layer of Filtek™ Z350XT Universal Restorative, shade A3E was applied and light cured.

Fig. 9: Sof-Lex™ Discs are used to define the outline of the restoration and create secondary anatomy.

Fig. 10: Pre-polishing of restoration with Sof-Lex™ Pre-Polishing Spiral.

Fig. 11: Polishing with Sof-Lex™ Diamond Polishing Spiral to create a final smooth and high-gloss polish.

Dr. Paulo Monteiro obtained his degree as a Doctor of Dental Medicine at the Instituto Superior de Ciências da Saúde-Sul and his Master’s Degree in Dental Medicine at the Instituto Superior de Ciências da Saúde Egas Moniz (ISCSEM) in Caparica, Portugal. He completed his specialization in Esthetic and Restorative Dentistry at the ISCSEM and obtained a Master’s degree in Dental Medicine. Presently he is an Assistant Professor at ISCSEM for the Aesthetic and Restorative Dentistry Post-graduation program and for the Oral Rehabilitation Department at ISCSEM. He is also involved in research of new dental materials, including composite resins, dental adhesives, dental ceramics and new technologies.

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The Anaheim Group acknowledges 3M’s contributions to the dental industry for an 11th consecutive year

By 3M ESPE

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