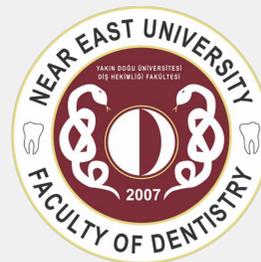


Global Clinical Case Contest 2019-2020



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Introduction to the case

A 30 years old male patient has visited our clinic during COVID-19 pandemic for his complaint about coloration occurring under old composite restorations and the diastema between his maxillary central teeth. After the clinical and radiographic examinations were done; we found that the left maxillary central tooth was endodontically treated. Both central incisors had old composite restorations on the mesial side, and secondary caries was detected under these restorations. Apart from these issues, the right central incisor was aligned at retrusive position and this misalignment was also causing an unesthetic smile. The treatment plan was including removal of old restorations and secondary caries, also make aesthetic and functional restorations with a minimally invasive approach.

Before



Initial smile before the treatment

After



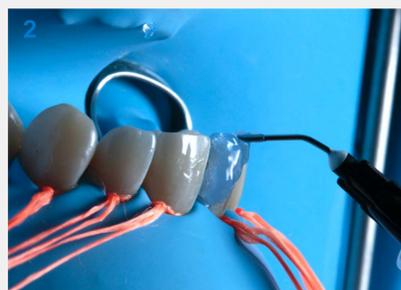
Change of smile after the treatment

Treatment steps



Preparations for restorations

Removal of old restorations and carious lesions following rubber dam isolation



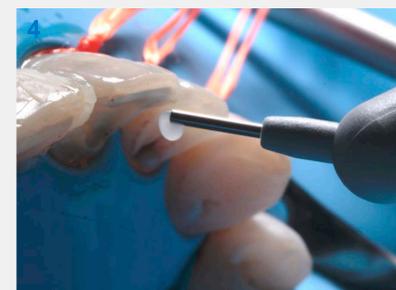
Etching Phase

Etching enamel surfaces with %37 orthophosphoric acid gel to achieve maximum adhesion



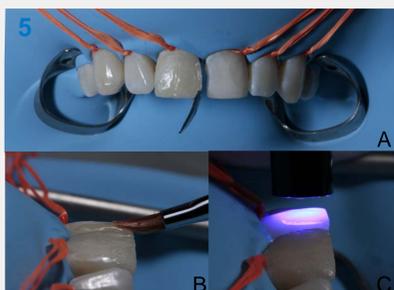
Adhesive Phase

Applying Prime&Bond Universal adhesive to etched surfaces



SDR Plus U® application instead of a fiber post

Strengthening remaining tooth structure by inserting SDR Plus U® into the entire endodontic space which starts from the 5 mm below of the cervical line.



Restoration steps on labial surfaces

A: Palodent® sectional matrix band application to achieve proper emergence profile, B: Application of the composite with a composite brush, C: Polymerization of the composite restoration



Finishing and polishing

Enhance® PoGo® system were used for finishing and polishing of the restorations



Correction of the tooth alignment

A A2 shade Ceram.x SphereTEC One® veneer restoration applied to correct the right central's retrusive position. A: Before the treatment and B: After the treatment



Final smile

Our patient with his new confident smile

Material and Method

Shade selection was done prior to all other procedures to avoid tooth dehydration caused misselection of the color. After the rubber-dam isolation, old restorations and secondary caries were removed. Following etching step with %37 orthophosphoric acid, Prime&Bond Universal adhesive was applied. For the left central, SDR Plus U® was applied from 5 mm below of the cemento-enamel junction to get support from the root canal and in order to strengthen remaining tooth structure. Palodent® sectional matrix band placed vertically to ensure proper emergence profile thus to maintain good periodontal health. Ceram.x SphereTEC One® A2 shade veneer was applied to restore teeth alignment, color and form. Finally, finishing and polishing was done with the Enhance® PoGo® system.

Discussion and Conclusion

Combining minimally invasive approaches with proper material selection is indispensable to today's preventive dentistry philosophy. Maximum amount of tooth structure should be preserved while achieving esthetic and functional treatment outcomes. With this perspective, SDR Plus® bulk fill composite was used instead of using a post to avoid unnecessary root dentin removal in the present case. One shade resin composite Ceram.x SphereTEC One® gives us a chance to reduce our chair side time in these Covid-19 pandemic days which is an important factor during daily practice not only for the patient but also the dentist.

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