

Global Clinical Case Contest 2022-2023



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Introduction to the case

A 35 years old male patient came to our restorative clinic complaining of pain in teeth: 1.4, 1.5, 1.6, 1.7 which had previously been treated 6 years ago. Examination revealed defective composite restorations with recurrent caries. After X-ray examination and comprehensive analysis it was decided to re-treat these teeth.

Before



Initial view, before the treatment.

After



After rehydration.

Treatment steps



Step 1 Removal of defective restorations

Previous composite restorations have been removed.



Step 2 Removal of the caries

All caries was removed by selective carious excavation to firm and hard dentine.



Step 3 Etching and Bonding

Isolation of the operative area using rubber dam. 37% phosphoric acid was applied to the enamel margins for 30 seconds. Adhesive protocol was made with **Prime&Bond Universal** which was applied using microbrush.



Step 4 Matricing

Application of the matrix system **Palodent V3**.



Step 5 Occlusal morphology

Occlusal morphology reconstruction by oblique incremental packing technique. By using **Neo Spectra ST** with **SphereTEC**.



Step 6 Removal of oxygen-inhibited layer

The oxygen-inhibited layer was removed with **Enhance polishing cup**.



Step 7 Checking of occlusion

Occlusal finishing and then we monitored the premature contacts using articulating paper.



Step 8 Finishing and Polishing

Finishing and polishing was the final step using **Enhance** kit. Photo after the rehydration.

Material and Method

The operating field was isolated with rubber dam. Selective enamel etching was performed for all cavities by using the 37% phosphoric acid gel. Prime&Bond Universal adhesive system was applied on enamel and dentine using microbrush and left for 20 seconds then air thinned for 5 seconds using light air pressure then light cured for 20 seconds. Palodent V3 matrix system was applied. Neo Spectra ST with SphereTEC was packed in oblique incremental technique. To remove the oxygen-inhibited layer Enhance polishing cup was used. Enhance and Enhance PoGo were used for finishing and polishing the restorations, meanwhile the contact points were finished using finishing strips.

Discussion and Conclusion

The restorations were performed in minimally invasive concept. Proper restoration of contact points is integral part of the adequate function and aesthetic of the dentition. Modern composite materials allow to create restorations identical to the natural teeth in both aesthetic and function aspects. The use of Palodent V3 matrix system gives an opportunity to reconstruct contact points in the best way.



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