

Global Clinical Case Contest 2020-2021

1.
Place



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Introduction to the case

A 26-year-old patient presented before orthodontic treatment complaining of pain in teeth 1.5, 1.6, which had previously been treated several years ago. Examination revealed a breach of marginal adhesion of the filling material in the area of teeth 1.4, 1.5 and 1.6. Also, in the area of teeth 1.4, 1.5 there are chips of filling material, in the area of teeth 1.4, 1.5, 1.6 there are a secondary carious process. After X-ray examination and comprehensive analysis it was decided to re-treat these teeth.



Initial view, before the treatment.



The final result of the treatment, 3 days after rehydration.

Treatment steps



Step 1 Isolation

Isolation of the working area with the cofferdam system.



Step 2 Sectional matrix positioning

Adapting the matrix to the proximal tooth surfaces with wedges and ring system Palodent V3.



Step 3 Etching

Etching of dental cavities with 37% orthophosphoric acid.



Step 4 Proximal walls reconstructing

The proximal surfaces of all three teeth were restored with a matrix system and Ceram.X SphereTEC composite (shade A1). Also, occlusal correction of the contact points was performed.



Step 5 Dentine layer reconstruction

And at the following stage we have started a restoration of dentine layer in teeth 1.4, 1.5, 1.6 with bulk-fill material SDR.



Step 6 Occlusal morphology reconstruction

Next we performed a direct restoration of the chewing surface of teeth 1.4, 1.5 and 1.6 using Ceram.X SphereTEC (shade A2).



Step 7 Occlusal finishing

We then monitored the likelihood of premature contacts using articulating paper.



Step 8 Finishing and polishing

The final step was the removal of the oxygen-inhibited layer with the Enhance polishing cup and Prisma Gloss extra fine. Photo after the rehydration

Material and Method

The operating field was isolated with a cofferdam system. The cavities were etched by using the 37% orthophosphoric acid gel. For the adhesive preparation was used the universal adhesive system Prime & Bond One ETCH and RINSE. Palodent V3 matrix system was applied. The dentine layer was restored with the material SDR. For reconstructing of contact walls were used Ceram.X SphereTEC (shade A1), and for a chewing surfaces we used Ceram.X SphereTEC (shade A2). To remove the oxygen-inhibited layer was used Enhance polishing cup and Prisma Gloss extra fine paste. On the latest steps of finishing and polishing were made by Enhance and Enhance PoGo. Contact points were treated with low abrasive discs and strips.

Discussion and Conclusion

We have carried out the treatment in a minimally invasive direct restorative technique. Finally, I would like to thank Dentsply Sirona for providing me with the materials and the opportunity to participate in the Global Clinical Case Contest.



Academy