

# Global Clinical Case Contest 2020-2021

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Place



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## Introduction to the case

A 34-year-old female came to the hospital complaining about the poor aesthetics of her upper anterior teeth. After analysis, direct composite restoration was chosen for the rehabilitation of the defected tooth and aesthetic adjustment of the adjacent tooth. In this case, direct composite restoration is the preferred option for aesthetic restoration and aesthetic adjustment. Aesthetic and functional rehabilitations were achieved using the state-of-the-art Dentsply Sirona restorative products.

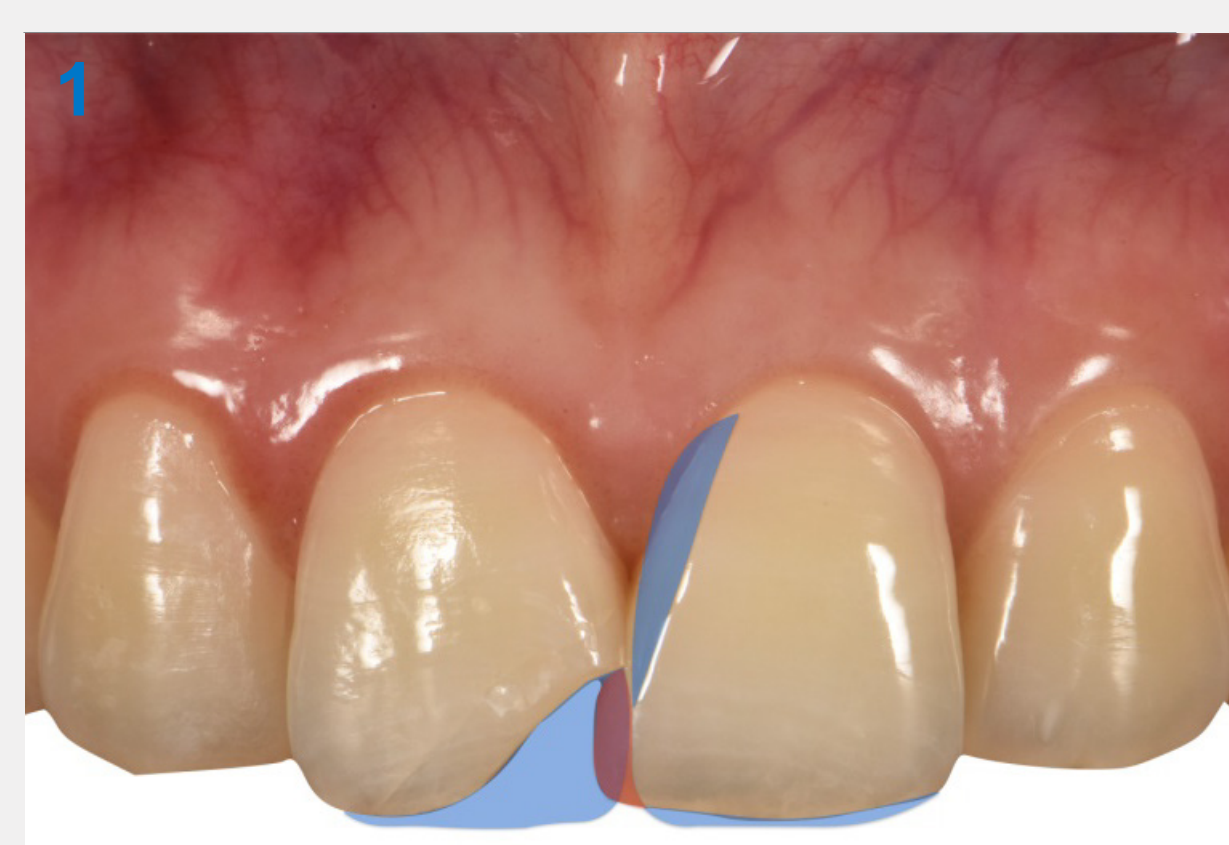


Pre-operative look showed the defect of #11-tooth, and the sharp mesio-incisal angle of #21-tooth was beyond the median line. There was a misalignment of #11, #21-teeth.



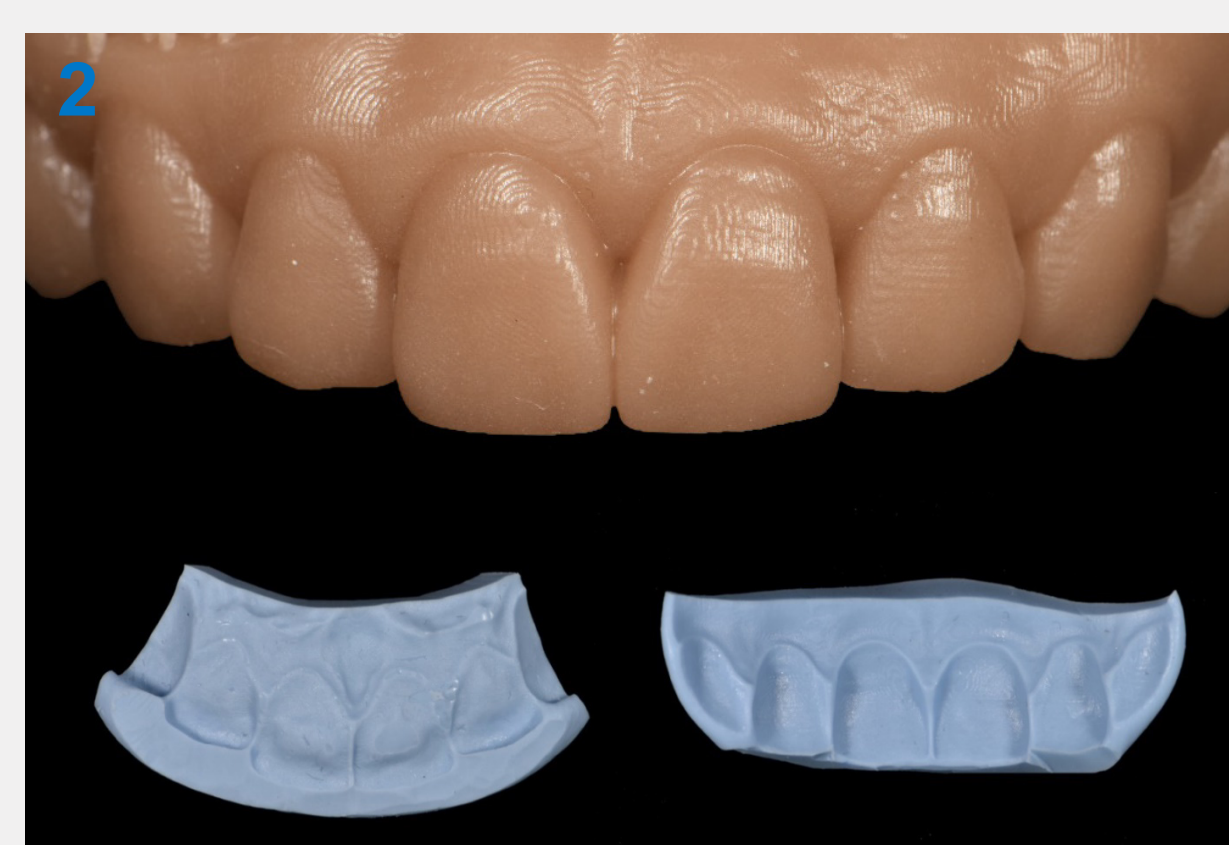
Final result showed reconstructed #11, #21-teeth with symmetric shape, color, and translucency which were blended in with the surrounding teeth. Patient's satisfaction was obtained.

## Treatment steps



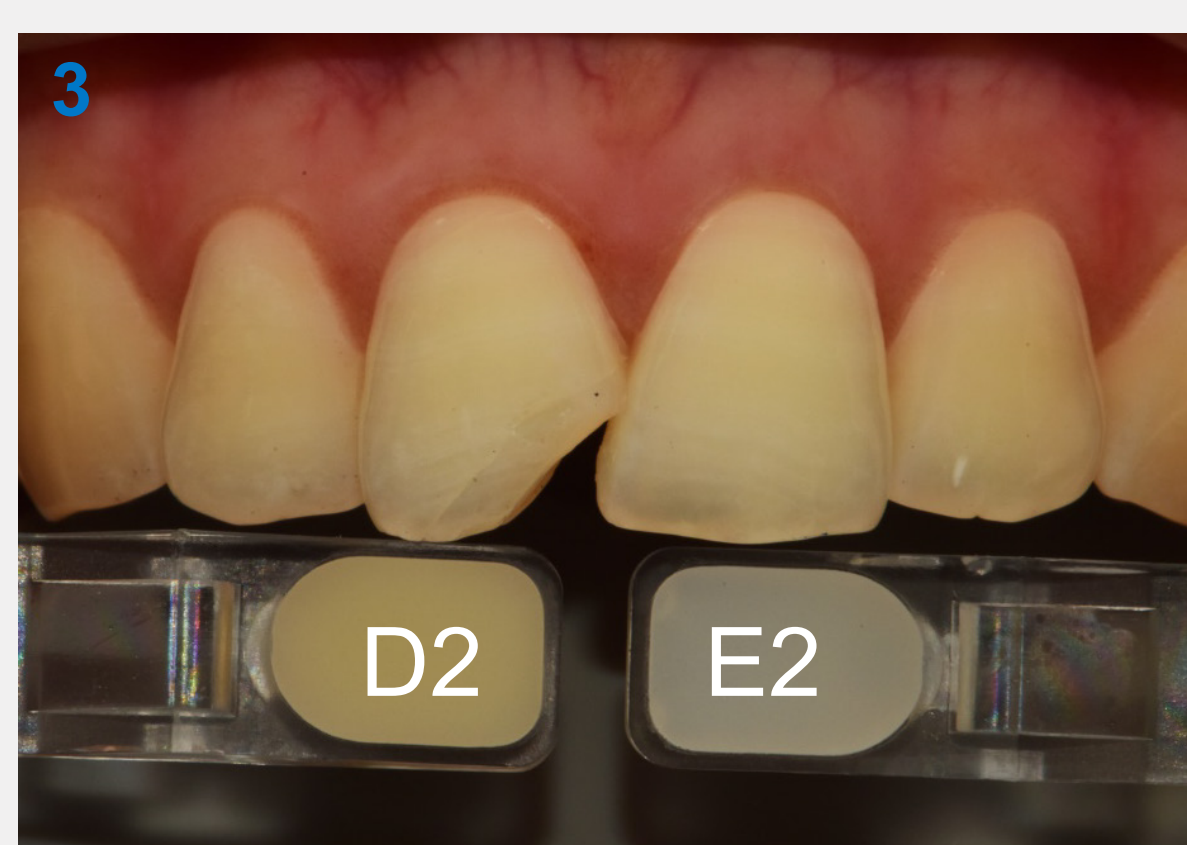
### Pre-operative DSD assessment

DSD assessment was performed. The blue mark represented the teeth with the addition of composite, and the red mark represented the tooth beyond the median line which should be cut and modified.



### 3D-printed replica and silicon index

According to the DSD, a digital diagnostic waxing was generated in advance, followed by the creation 3D-print replica and labial/palatal silicon index.



### Color analysis and shade selection

Shade selection was performed under the polarized light with the result of D2 for the dentin and E2 for the enamel.



### Shape modification of #21-tooth

The sharp mesio-incisal angle of #21-tooth was firstly modified to create space for the repair of #11-tooth under the guidance of palatal silicon index.



### Teeth restoration of #11-tooth

Next, we come to rehabilitate the defected #11-tooth. Class IV of #11-tooth was firstly transformed into Class I guided by the palatal silicon index and Palodent V3 system. Ceram.x duo shade D2 and E2 were used to recreate the structure and translucency of the natural tooth.



### Shaping, finishing and polishing

After the restoration, the anatomy and transition line were marked and the restorations were contoured and textured with the carbide tungsten. Then, the restorations were further shaped and polished using Enhance Finishing System and Enhance PoGo Finishing System.



### Immediate result

The immediate result revealed desirable shape and color of the additional restorations. The high-end glossy finish and vivid micro-texture successfully mimicked the natural teeth.



### Immediate result with smile

Post-operative view showed a harmonious relationship between lips and teeth. The patient was satisfied with her new smile.

## Material and Method

Firstly, the bevel of defected #11-tooth was prepared and the anatomy of #21-tooth was adjusted. Then, we performed selective etching and applied **Prime&Bond universal™ Universal Adhesive**. **Dentsply Ceram.X duo® D2** and **E2** were used to modify the shape of #11-tooth and #21-tooth. After shaping the contour and surface texture, the restorations were finally shaped and polished using **Enhance Finishing System** and **Enhance PoGo Finishing System**.

## Discussion and Conclusion

1) This case was faced with several aesthetic problems in a limited space, like a defect, mal-alignment and inclination. Performing an aesthetic treatment while preserving the natural tooth in such a case was complicated for the dentist. So correct planning of the case is a crucial factor, and with the help of digital technology like DSD, CAD and 3D printing, a predictable aesthetic outcome was presented and a precisely minimally invasive restoration was guided from 3 dimensions during the treatment. 2) Direct composite restoration is considered the most conservative and least invasive to rehabilitate the anterior teeth. Besides excellent aesthetic property, it has great advantages of easy addition, reduction, and repairment. 3) Ceram.x duo is suitable for teeth restoration which shows superior aesthetic performance and satisfying handling properties while providing a predictable outcome.



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