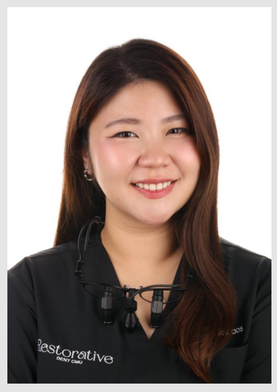
GCCC Global Clinical Case Contest 2024-2025



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Introduction to the case

A 36-year-old male patient presented following orthodontic treatment with concerns about an unesthetic smile and spacing in the maxillary anterior region. The first premolars had been orthodontically repositioned to substitute for the canines. Labial gingiva displayed marginal discrepancies. The patient also exhibited facial asymmetry and a canted smile. He requested improvement in tooth appearance using a stronger and more esthetic material. After comprehensive analysis, a fully digital workflow was selected for treatment planning and restoration using **CEREC Tessera™.**

Frontal intra-oral view, before treatment, showing spacing, orthodontically substituted first premolars in the canine position, and gingival margin discrepancies.

Frontal intra-oral view at 1-month follow-up after cementation, showing improved overall tooth appearance and esthetics.

Treatment steps

1

Step 1 Digital smile design

A preoperative digital smile design was created to illustrate the patient's desired tooth proportions and gingival contours. This aided effective interdisciplinary communication.

2

Step 2 Gingival management

Gingivectomy was performed on teeth 15, 14, 11, 24, and 25 using a surgical stent guided by the digital smile design. An 8-week healing period followed.

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Step 3 Tooth whitening

At-home bleaching was carried out to enhance tooth brightness and create a more uniform color tone.

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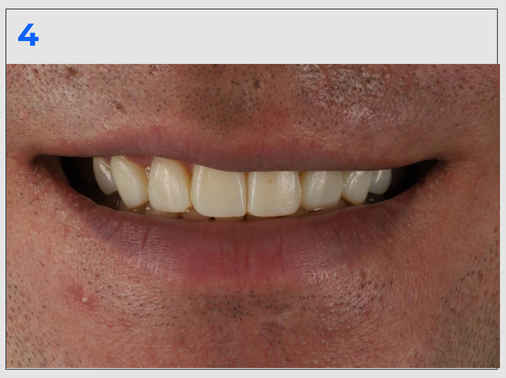

Step 4 Mock-up

A mock-up was used to communicate the anticipated form and function of the restorations. It served as a guide for conservative and precise tooth preparation.

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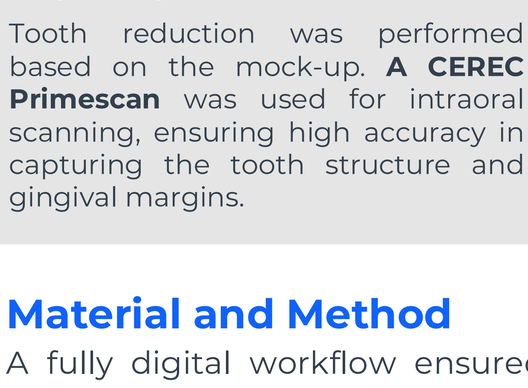

Step 5 Preparation

Tooth reduction was performed based on the mock-up. **A CEREC Primescan** was used for intraoral scanning, ensuring high accuracy in capturing the tooth structure and gingival margins.

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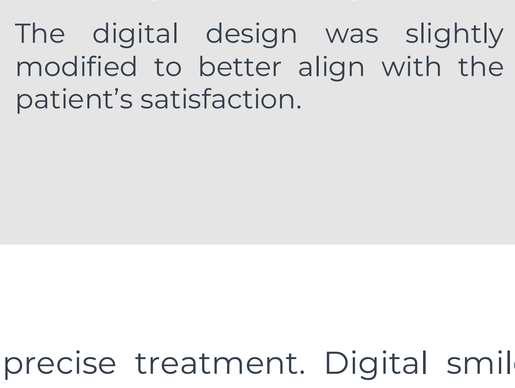

Step 6 Digital final design

The digital design was slightly modified to better align with the patient's satisfaction.

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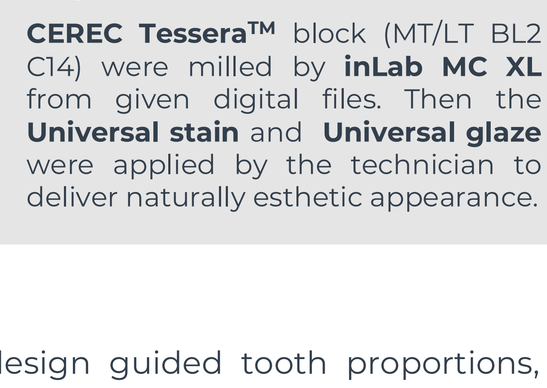

Step 7 Fabrication

CEREC Tessera™ block (MT/LT BL2 C14) were milled by **inLab MC XL** from given digital files. Then the **Universal stain** and **Universal glaze** were applied by the technician to deliver naturally esthetic appearance.

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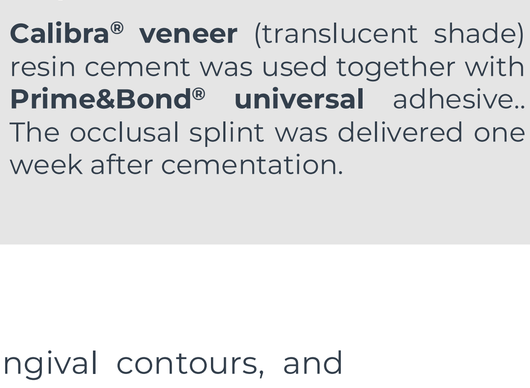

Step 8 Final outcome

Calibra® veneer (translucent shade) resin cement was used together with **Prime&Bond® universal** adhesive.. The occlusal splint was delivered one week after cementation.

Material and Method

A fully digital workflow ensured precise treatment. Digital smile design guided tooth proportions, gingival contours, and esthetics. A surgical stent enabled accurate gingival correction, followed by 8-week healing period. At-home bleaching enhanced brightness and uniformity. A mock-up illustrated final outcome and guided minimally invasive preparation. Intraoral scanning with **CEREC Primescan** was combined with the digital design to fabricate restoration using **CEREC Tessera™ blocks.** Cementation was performed using **Calibra® veneer** (translucent) and **Prime&Bond® universal** adhesive. An occlusal splint was delivered one week after cementation.

Discussion and Conclusion

This case demonstrated a minimally invasive, esthetically driven approach using a fully digital workflow. Digital smile design enabled precise planning of tooth proportions and gingival contours, while enhancing interdisciplinary communication. A surgical stent allowed accurate soft tissue correction. The mock-up served as both a visual aid and a guide for conservative tooth preparation, minimizing unnecessary enamel removal. **CEREC Tessera™** restorations provided excellent esthetics and mechanical strength with reduced processing time. The final result was a harmonious, natural-looking smile that fulfilled the patient's expectations in both function and esthetics.

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