



Oral rehabilitation for a patient with oligodontia and maxillary hypoplasia following Blepharocheilodontic syndrome (BCD).

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INTRODUCTION

Blepharocheilodontic syndrome (BCD) is a rare genetic disorder characterized by craniofacial anomalies, maxillary hypoplasia, and oligodontia. Patients often present with significant functional and esthetic challenges due to missing teeth and underdeveloped dental arches. In this case, a young patient with BCD was examined and treatment planned for a conservative oral rehabilitation using a digitally designed, 3D-printed removable snap-on appliance to restore function, esthetics, and confidence during craniofacial growth.

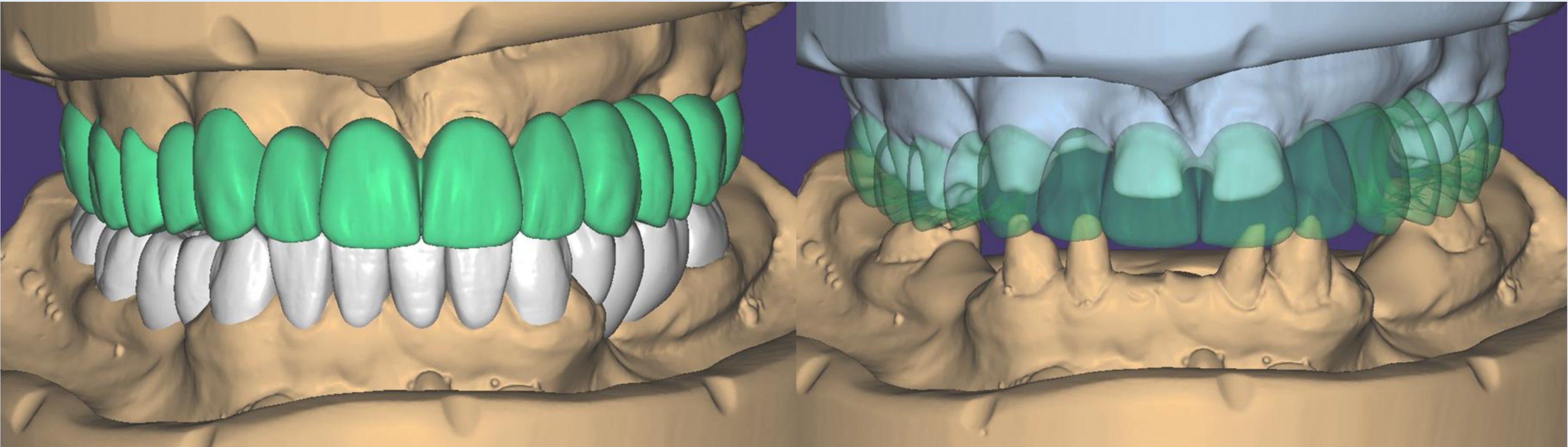
CASE PRESENTATION AND PLANNING



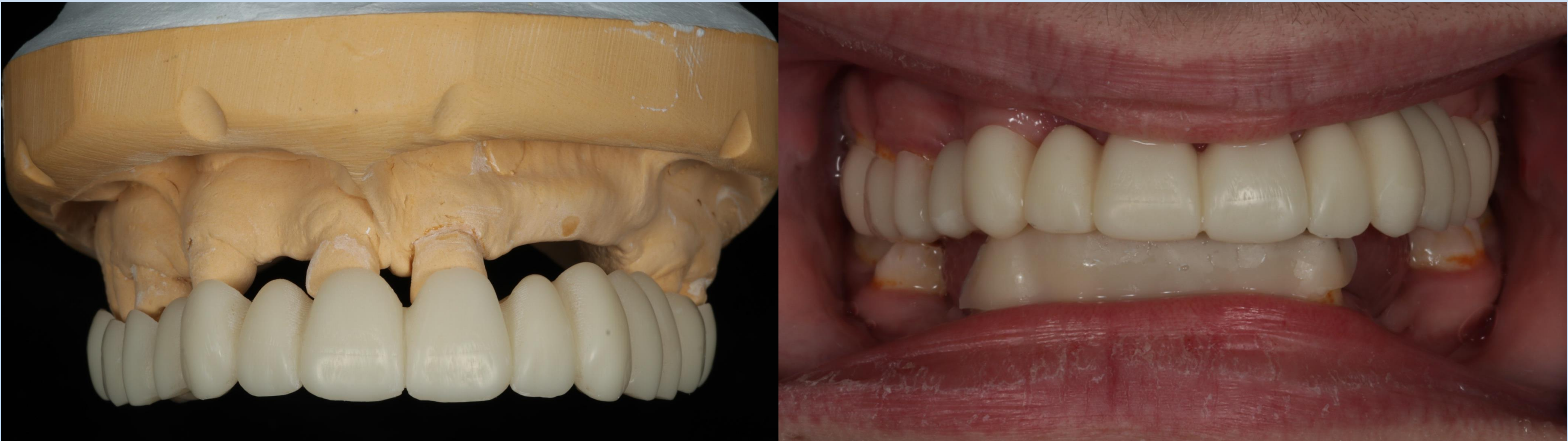
Radiographs reveal retained primary dentition, conical crowns, cervical constriction of the teeth, impacted #12, and third molars.



Clinical photos demonstrates oligodontia with multiple congenitally missing teeth. The present dentition shows conical-shaped anterior teeth with reduced mesiodistal width and spacing throughout the maxillary and mandibular arches. Alveolar ridges appear underdeveloped, especially in the maxillary anterior region, consistent with lack of tooth eruption.



Digital wax-up of proposed restorations. Digital block out model with specific path of insertion.



3D-printed interim removable snap-on appliance verified on the stone model. (left) Clinical try-in appointment with mandibular anterior mock-up assessing occlusal vertical dimension, esthetics, and phonetics. (right)



Final mandibular PFM surveyed crowns and fixed dental prosthesis prior to insertion, opposing maxillary printed model of interim removable snap-on appliance. Final treatment will include mandibular Cr-Co framework and acrylic removable partial denture.

***Alternative treatment plans presented to patient including complete dentures for interim and implant supported prosthesis after maxillofacial growth.**



CONCLUSIONS

The ability to virtually design and block out the path of insertion allowed for a passive, retentive fit without the need for tooth preparation or adhesives. Utilizing this approach, a removable appliance was fabricated that restored esthetics and function while respecting ongoing craniofacial growth. Treating patients with BCD presents unique challenges due to oligodontia and maxillary hypoplasia, but the use of digital technology provides a conservative, reproducible, and patient-friendly solution that enhances predictability and outcomes.