

## 3M<sup>SM</sup> Health Care Academy

# Using Aligners in Interdisciplinary Treatment to Deliver Esthetic Solutions



**Ryan McComb, DMD, MS**

Dr. Ryan McComb graduated from Harvard University in 2010 with a DMD and earned his orthodontic certificate and master's degree from the University of California, Los Angeles in 2013. Dr. McComb opened his private practice in the hyper-competitive Los Angeles market and has quickly demonstrated that the

opportunity for rapid practice growth exists even in the most saturated markets. Dr. McComb is board certified and is a lecturer at UCLA. His speaking interests include practice management, team development and marketing. When not in the office, you'll find him mountain biking, surfing or skiing.

### Introduction

As orthodontists, it is easy to feel like we practice on islands, yet it is critical for us as specialists to work with other oral care professionals when it comes to the best interests of our patients and their orthodontic and long-term dental goals.

To address the changing esthetic needs of our patients, interdisciplinary collaborations have become a necessity. To be successful in our pursuits, we must establish an open line of communication from the very beginning — and keep that line of dialogue open as modifications (if any) need to be made to the overall treatment plan.

Restorative treatment is often a combination of oral function and smile esthetics, and not only when the case is completed, but during treatment as well. 3M™ Clarity™ Aligners provide the option of esthetic treatment without sacrificing the control needed to achieve spacing and optimal esthetics for implants, crowns or other restorative dentistry needs.

### Diagnosis

I had a 45-year-old male patient approach me with the desire to improve his alignment, close small spaces (between UR2 and UR3) and prepare for dental implants in the UR6 and LR7 areas (Figure 1A-I). The patient's chief complaint was the crowding and the minor spacing. He had a Class I malocclusion with moderate lower crowding and mild upper crowding (U&L, 3×3), and a need for improved arch development and coordination.

When he first walked into my practice, the patient was scheduled to receive two implants in three months. It should be noted that the patient already had crowns on his LL7 and UL4.

The same day I consulted with the patient, I called his dentist — whom I had previously worked with on other cases — to formulate the treatment plan.

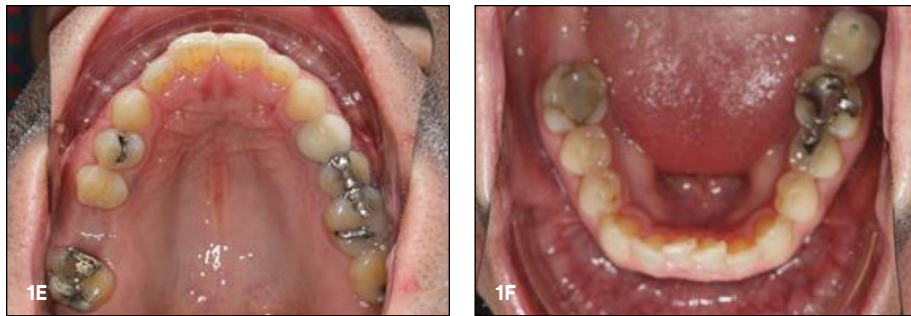


Figure 1A-I: Initial photos.



Figure 2: Initial radiographic imaging.

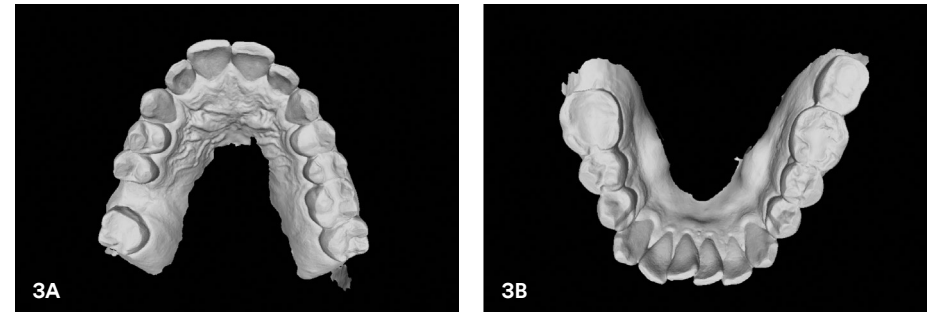


Figure 3A-B: Initial maxillary and mandibular occlusal view.

## Treatment Plan

I utilized Clarity™ Aligners to develop his upper and lower arches, align his upper and lower teeth and stabilize his bite. The aligners were used purely for esthetic reasons. The patient opted for aligners over brackets so they would be less visible.

The plan also involved maintaining spaces for future implants by using programmed space maintenance in the UR6 and LR7 areas and minor tooth uprighting programmed into the aligners on the teeth that were immediately adjacent to these spaces.



Figure 4A-E: Photos four months into treatment.



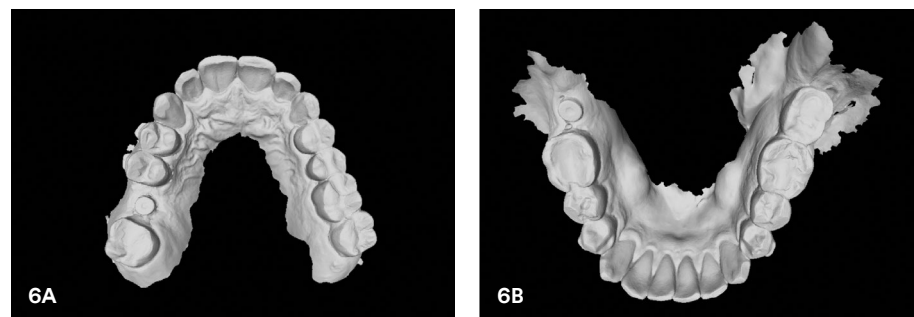
**Figure 5A-I:** Photos six months into treatment.

At initial delivery, we added seven attachments, consisting of six bevels (UR5, UR4, UL5, UL4, LR4, LL4) and one bar (LR3). To bond the attachments, we used 3M™ Transbond™ Plus Self Etching Primer, 3M™ Transbond™ LR Light Cure Adhesive and the 3M™ Clarity™ Aligner Attachment Template.

After 13 weeks, we completed the initial 13 trays – with the patient wearing one new tray every week. Three months after the attachments were bonded, we performed a refinement scan, using our 3Shape TRIOS® Intraoral Scanner. The refinement consisted of eight trays to finish and detail the case.

The patient's final visit (Figure 7A-I) took place 10 months after the initial visit. Following treatment with the aligners, the patient received crowns on top of the implants. For retention, I fitted the patient with upper and lower clear retainers.

The patient was in active movement for six months. Overall, I found this treatment to be very predictable and the case tracked nicely — even for minor rotational movements in the anterior, which can sometimes be difficult to control with aligners.



**Figure 6A-B:** Maxillary and mandibular occlusal views, six months into treatment during first refinement.



**Figure 7A-I:** Photos on patient's final visit, 10 months after starting treatment.

## Conclusion

The patient was very happy with the treatment outcome. He was also very satisfied with the overall comfort and esthetics of Clarity™ Aligners.

Although I have done other cases with aligners that are similar in complexity to this one, this is the first that I have treated using Clarity™ Aligners. The experience has been seamless and I would feel confident treating even more complex cases that include implants, crowns, or other restorative dentistry needs with a similar approach in the future.

*Case photos provided by Dr. Ryan McComb.*