

# ALIGNER CORNER

## Complex Treatment with Clear Aligners

**I**t's been two years since JCO has published an issue devoted entirely to clear aligner therapy. That makes it past time to revisit its progress as a technique capable of treating complex orthodontic problems.

This special issue leads off with an adult Invisalign case treated by Dr. El-Bialy with the mandibular advancement feature and photobiomodulation. When I looked at the pretreatment end-to-end molar relationship and the amount of lower incisor rotation correction achieved in a seven-month treatment period, I was astounded.

Two of this month's articles demonstrate space closure for extracted or missing teeth. Extraction cases are still considered to be the most difficult to treat with aligners alone. Proper case selection and the use of creative auxiliaries such as temporary anchorage devices (TADs) can make these treatments more predictable, as shown in the Case Report by Drs. Antelo, Meira, García, Elías,



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and Tanaka. Drs. Wilmes, Schwarze, Vasudavan, and Drescher present two cases of canine substitution using a combination of the Mesialslider appliance, palatal TADs, and aligners.

Transposition of a maxillary lateral incisor and canine is managed with clear aligners in an article by Drs. Giancotti, Conigliaro, and Mampieri. Drs. Lou and Caminiti then offer a thorough overview of surgical-orthodontic aligner treatment. Their first case was treated in the traditional way of decompensating the dentition prior to surgery, but the other was closer to a "surgery first" approach. With the digital planning and surgical guides described by the authors, multi-piece Le Fort procedures are easier to manipulate and control. The article also includes a good review of various ways to achieve intermaxillary fixation, as well as some pointers on avoiding postsurgical orthodontic relapse. It's clear to me that the future of surgical-orthodontic treatment will be with clear aligners, and that many of these cases can be treated with a "surgery first" approach (see the article by Drs. Chang, Steinbacher, Nanda, and Uribe in JCO, July 2019, for further evidence).

As clear aligner therapy has advanced over the years, I have noticed more and more emphasis on combining treatment methods rather than breaking them into distinct phases. Three examples of this kind of efficiency are "surgery first" followed by aligners, mesialization of an entire arch using aligners concurrently with TADs, and the hybrid approach for extrusion and rotation of posterior teeth illustrated in the Pearl by Dr. Palone and colleagues. I hope you enjoy the variety of cases presented this month.

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