

THE EDITOR'S CORNER

The Most Challenging Cases

An interesting question was posed to me recently in an interdisciplinary case conference at a university-based medical center dental school. These conferences are generally attended by specialists from other dental disciplines and occasionally by craniofacial, plastic, or ENT surgeons. Having been a practicing general dentist for almost 10 years before returning to school for orthodontic specialty training, I am frequently amazed at how little other health-care practitioners know about orthodontics and dentofacial orthopedics. This time, the question that caused my surprise was simply: "What are the most difficult malocclusions to treat?"

What baffled me was the naivete of many of the senior dentists and physicians, who appeared to be under the delusion that all malocclusions are treated roughly the same, and that there is really no difference in difficulty between one case and another. I explained that there are indeed "easy" orthodontic cases—at least in the hands of a well-trained and certified orthodontist—as well as "moderate" or "average" cases and others that are quite difficult. I added that what one orthodontist may see as particularly challenging in terms of attaining a healthy, functional, and esthetic outcome might be less challenging to another orthodontist, and that "difficulty" was to some degree a matter of opinion. Of course, the attendees pressed me to tell them what type of malocclusion I personally considered to be the most difficult. To me, the most challenging cases would be those with a strong negative behavioral component, in which the patient is utterly non-compliant or the patient (or parents) are completely unrealistic in their demands with respect to time, outcome, or affordability. Putting aside behavioral factors, though, I had to settle on the high-angle anterior open-bite cases in which, for one reason or another, orthognathic surgery is not an option. Over the years, as I have become experienced working with one particular oral and maxillofacial surgeon, a high-angle anterior open bite has become as routine as a Class II, division 1 extraction case. Without the surgical

option, however, I am frequently left scratching my head to come up with a viable approach.

When I took the Tweed course almost 20 years ago, I was in awe of the remarkable outcomes achieved by the senior clinicians in high-angle anterior open-bite cases. They employed creative extraction patterns in conjunction with a mastery of biomechanics and wirebending skills seldom seen in today's world of high-tech archwires and pre-programmed appliances. Of course, there are other ways of dealing nonsurgically with high-angle anterior open bites, usually involving intrusion of the posterior teeth. An old, highly effective yet relatively unknown method is to place posterior bite blocks, either fixed or removable, to intrude the premolars and molars, thus allowing the anterior teeth to come into occlusion. I still use this technique in patients whom I can count on to follow my directions. The obvious problem with removable bite blocks is compliance, and many patients simply can't handle the temporary bite-opening effect of fixed bite blocks. Other techniques include mandibular cervical traction, vertical-pull chin cups, and vertical-pull headgear, along with spring-loaded appliances and repelling magnets.

In 2006, Dr. John P. DeVincenzo introduced in JCO a unique application of skeletal anchorage called the Vertical Adjustable Corrector.^{1,2} Since then, various authors have presented methods of using skeletal anchorage to close anterior open bites by intrusion of posterior teeth. In this issue of JCO, Drs. Jae Hyun Park, Kiyoshi Tai, and Miwa Ikeda describe an approach similar to DeVincenzo's, but with the interesting twist of an upper lingual appliance. Our nonsurgical options for treatment of high-angle anterior open bites continue to grow. **RGK**

REFERENCES

1. DeVincenzo, J.P.: A new non-surgical approach for treatment of extreme dolichocephalic malocclusions, Part 1: Appliance design and mechanotherapy, *J. Clin. Orthod.* 40:161-170, 2006.
2. DeVincenzo, J.P.: A new non-surgical approach for treatment of extreme dolichocephalic malocclusions, Part 2: Case selection and management, *J. Clin. Orthod.* 40:250-260, 2006.