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# THE EDITOR'S CORNER

# **Overnight Sensation**

I once saw an interview with a singer who had just had three songs reach No. 1 on the country hit parade. The interviewer asked her what it felt like to be an overnight success. The singer, although she was still quite attractive, was obviously no youngster, and she chuckled at the implication that she was a newcomer to the trade. "Becoming an overnight success feels great," she said, "especially since it took 20 years of hard work to do it!"

Like that country singer, orthodontic skeletal anchorage devices—miniscrews—have achieved a remarkable level of acceptance in what seems like an instant, but actually took more than 20 years. In April 1983, in a JCO article titled "The Possibility of Skeletal Anchorage", Thomas Creekmore and Michael Eklund presented a case with a severe deep bite in which skeletal anchorage was achieved with a surgical screw implanted just inferior to the anterior nasal spine. Elastic thread was used to apply intrusive force to the upper incisors, resulting in the correction of the deep bite and the establishment of a more acceptable smile line. In that article, Drs. Creekmore and Eklund said:

"Toothborne anchorage is one of the greatest limitations of modern orthodontic treatment, because teeth move in response to forces. While extraoral anchorage can be used to supplement toothborne anchorage and to deliver forces in directions not possible with intraoral forces, extraoral anchorage has severe limitations because it requires excellent patient cooperation. . . .

"If skeletal anchorage could be applied to orthodontic tooth movement, it might offer capabilities heretofore unavailable. With screws, pins, or some other readily removable implant anchored to the jaws, forces might be applied to produce tooth movement in any direction without detrimental reciprocal forces. Orthopedic forces might be applied directly to the jaws through skeletal anchorage rather than through toothborne anchorage. The need for extraoral forces and the removal of teeth might be greatly reduced."

Today, those words sound prophetic. Earlier this year

(JCO, March-April 2006), John DeVincenzo presented cases in which extremely dolichocephalic malocclusions were treated with a combination of miniscrews and intrusion mechanics. In the past, the only way to deal with such cases would have been through a combination of extractions and orthognathic surgery. Dr. DeVincenzo's results represented a major advancement in the treatment of high-angle cases, eliminating the need for most maxillary impaction surgeries.

The paradigm shift continues. In this issue, Jai-Min Jeon and his co-authors present a technique that, if adopted on a widespread basis, would eliminate the need for compliancedependent Class II elastic wear. Who among us does not have cases that could have been finished much better if we didn't have to depend on patients to wear their elastics? Similar results are seen in the treatment of a mild Class III by Cheol-Ho Paik and colleagues. Again, miniscrews are utilized to provide intraoral anchorage for the application of elastic forces in directions that were previously unattainable without the use of extraoral anchorage appliances, which are entirely dependent on patient compliance, or bulky and uncomfortable fixedfunctional devices.

Each of these three articles—DeVincenzo, Jeon, and Paik—present cases in which an entire dentition is moved en masse. Dr. DeVincenzo intruded the upper arch to reduce the vertical facial dimension. Dr. Jeon and colleagues slid the entire upper dentition distally to achieve a Class II correction. Dr. Paik and his co-authors did the same with the lower dentition in a Class III case. Their short-term results are beyond reproach, but of course, we still have to ask whether these nonsurgical movements of entire denture bases will hold up in the long run. What modifications, if any, will be needed in our retention protocols? What will be the long-term periodontal effects? The jury is still out.

Earlier this summer, I was honored to participate once again in a special course offered at the Department of Orthodontics of the University of Ferrara, Italy. This unique department, chaired by the dynamic Giuseppe Siciliani, has a remarkable faculty, many of whom are frequent contributors to JCO. Every year, the department offers a monthly series of two-day thematic courses, each focused on a particular topic of interest to clinical orthodontists. This year's two-day sessions took the form of "trials", in which both sides of various topics were explored by different speakers from around the globe. After two days of presentations, the audience voted on which side presented the best case in evidence-based debate. Examples of the topics included Invisalign vs. lingual orthodontics and segmental vs. continuous-arch mechanics. The topic I "judged" was skeletal vs. traditional anchorage. Speakers from Korea, Italy, France, the Netherlands, and the United States all presented their cases. Some argued in favor of temporary skeletal anchorage devices, others in favor of "setting up" anchorage as taught in the Tweed discipline, or of various other methods of obtaining anchorage. Thorough, well-documented arguments were made on each side, but in the end, the audience felt that the preponderance of the evidence supported the side of traditional anchorage. It is not that the skeletal anchorage side "lost" the debate; it is simply that the majority of the literature to date has supported traditional anchorage.

That trial notwithstanding, the worldwide body of orthodontic literature has exploded with papers on skeletal anchorage devices over the last few years. JCO has been ahead of the curve, covering numerous applications of bone screws and plates since the mid-1990s. The articles presented in this issue take the body of evidence a little closer to the tipping point in favor of skeletal anchorage. I'm sure that if Tom Creekmore could see this paradigm shift occurring, he would take a great deal of pride and satisfaction in his prediction of 23 years ago. His response might echo that of the country singer: "Becoming an overnight success feels great, especially since it took 20 years of hard work to do it!"

**RGK** 

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