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THE EDITOR'S CORNER

Beyond the Extraction Debate

Although it is unlikely that the extraction debate will ever be completely resolved, the vast majority of practicing orthodontists currently accept that extractions are a necessary part of our treatment-planning bag of tricks, and that certain cases are best treated with extractions. When I'm introducing dental students to orthodontics—usually in their second or third year of dental school, and almost always in a classroom instead of the clinic—the topic of employing extractions to expedite orthodontic treatment always comes up. These students have been taught from the start of their training that dentists must avoid extractions at all costs, and that only the most hopeless of teeth should ever be extracted. When the idea of taking out otherwise healthy teeth for orthodontic reasons is introduced, you can see expressions of horror on many of the students' faces. At that point, I generally ask to see a show of hands of any who had undergone orthodontic treatment in the past. Most of the students raise their hands. I then ask how many of them had teeth extracted as part of their orthodontic treatment. The responses to that question have varied over the almost 30 years I have been teaching orthodontics: early on in my academic career, only a few hands were raised; nowadays, there are many more. For the moment, at least, the pendulum seems to have swayed back in the direction of extractions.

When I left general practice to return to school for specialty training, back in the 1980s, the battle over whether TMD was caused by orthodontic treatment—especially treatment involving extractions followed by retraction of anterior teeth—was in full swing. Many malpractice suits were filed on this very issue. In fact, a number of orthodontists quit doing extractions altogether, perhaps more out of fear of subsequent litigation than for treatment-related reasons. Almost any case can be treated without extractions. That is not the point. The real question is whether the treatment outcome will be better if extractions are done.

I went through my own nonextraction phase in the early 1990s, but when I looked back at my treatment results and the stability of the borderline cases I had opted to treat without extractions, I—like Charles Tweed many years before me—came to the realization that some cases are undoubtedly better off with extractions. It seems as if many of my peers have reached the same conclusion. Within the specialty, the debate is no longer over whether we should extract at all, but rather, *which teeth to extract.*

I once attended an interdisciplinary treatment conference in which faculty members from all dental specialties participated. I was a junior faculty member at the time; my boss, the department chair, was also in attendance. In the midst of a spirited discussion about an interdisciplinary case that required an unorthodox pattern of extractions to achieve an optimal treatment outcome, one of the prosthodontists present said with a tone of derision, "I thought you only extracted first premolars. Nobody misses those. Will you guys [referring to the orthodontists present] pull *any* tooth?" My boss looked at him and wryly responded, "No tooth is sacred to an orthodontist." This brought a laugh, as was intended, but my colleague went on to explain that the only tooth he had never personally indicated for extraction was an upper central incisor. As the years went by, the same held true for me.

Extraction patterns vary from case to case and from doctor to doctor. I know highly competent orthodontists who will extract only first premolars. I know others who advocate extraction of all four first premolars in crowded Class I cases, but upper first and lower second premolars in Class II cases, and vice versa for Class III. Perhaps the greatest learning experience for me in my entire career, following my specialty training, was when I attended the Tweed course in Tucson, Arizona, many years ago. The Tweed philosophy involves a well-considered assortment of extraction patterns applied across a wide variety of treatment circumstances, including some cases in which extractions are not used at all. To grossly oversimplify what I learned in Tucson, when extractions are indicated, the extraction pattern becomes more complex as the difficulty of the case increases. There is no disputing that the Tweed philosophy and technique can produce beautiful results. Even if some of the more complicated extraction patterns might seem unorthodox to some practitioners, that does not detract from the esthetics and functionality of the treatment outcomes.

In the current issue of JCO, Drs. Ivan Toshio Maruo, Fabricio Fernandes, and Hiroshi Maruo present a case in which lower first molars were extracted to treat a high-angle Class III malocclusion. Their facial and occlusal results are certainly impressive. While it could be argued that the case might have been handled in several different ways, including surgically, the young lady in question completed treatment with a beautiful face, a beautiful smile, healthy TMJs, and an entirely functional masticatory system. There can be no debating that this case turned out beautifully as a result of orthodontic extraction treatment. RGK