Editorial

Backward Orthodontics?

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Distalization as a regular treatment procedure in orthodontics is a relatively recent development. If we search in the remarkable 75-year online database of the *Angle Orthodontist,* we find the word ''distalization'' used in 54 articles since 1930. To our surprise, this word is never mentioned until 1975 in a report describing a case involving reproximation of buccal segments with distalization of premolars into the new space—written by me, coincidentally.[1] Ninety percent of the articles containing ''distalization'' were published only in the last 15 years, and over two-thirds of those, since the year 2000.

What surfaces from this word search is the somewhat sobering news that earlier orthodontists did not invent headgears in order to move molars backward. The headgear was proposed simply as a way to provide added anchorage, to hold and control upper posterior teeth during the course of orthodontic treatment. Silas Kloehn,[2] who popularized the cervical facebow headgear of Oppenheim which was based on Angle's designs, recommended it largely for maxillary anchorage and to help guide jaw growth—not for distalization of teeth.

An obvious question emerges: What is the reasoning behind the buzz today about driving maxillary molars backward to convert Class II Division 1 (II/1) malocclusion into Class I, or an extraction treatment into a nonextraction one? Perhaps it's related to the current appetite for nonextraction orthodontics. Or maybe it is because we now have a variety of competing appliances at our disposal to drive teeth backward.

Angle, Oppenheim and Kloehn would probably be perplexed by our array of fixed distalizers and implant-based distalizing systems. All are powerful mechanisms which, if we desire, are capable of backing up maxillary molars to the sphenoid bone with little need for patient compliance. What's the biologic point of all this new distalizing power, these pioneers might ask us, if they could. It's a good question that has not been asked often enough.

Is the point to resolve dental crowding or II/1 jaw growth discrepancy simply by pushing upper posterior teeth more posteriorly? That doesn't seem natural at all, nor does it make much biologic sense. The relentless mesial migration of teeth is a normal process of nature that has been noted since the time of the earliest anatomists and anthropologists. Orthodontists have learned to work with this biologic process, not to try to reverse it, except in certain cases of accidental space loss.

Other seldom-asked questions should be voiced. Isn't II/1 malocclusion, according to most research findings, largely the result of mandibular retrusion rather than maxillary protrusion? Are maxillary distalizers therefore built that way for design convenience rather than for biologic reasons? What will happen to second and third molars as a result of significant molar distalization? Does anyone know? We should want to know.

Frequently in orthodontics, we develop marvelous, new biomechanical tools—for example, osseous anchorage or superelastic-wire modules for tooth movement—and start applying them indiscriminately. Distalization may be a reasonable treatment objective for very specific sorts of orthodontic problems, such as within adult interdisciplinary treatments or regaining lost posterior arch space or in nagging cases of unilateral II/1 relation. We don't see these kinds of treatment needs often, so distalization would be at most a niche modality for the typical orthodontist—like removable aligner therapy—rather than a comprehensive, mainstream method. This suggestion may displease many labs, manufacturers and inventors already geared up for our embrace of their neat new products as a panacea.

In a larger context, a critique of distalization should underscore the importance of us doctors continually asking ourselves critical questions. When a new medical device is hatched, the selling group asks itself ''What's the market?'' When this product is introduced to us, we must ask ourselves, as conscientious clinicians, ''What's the point?'' Does the application make biologic sense? If we can't come up with any reasonably scientific merits, there is a good chance the new ''advance'' may actually set us backward—an unwelcome pathway indeed.

REFERENCES

1. Peck S, Peck H. Orthodontic aspects of dental anthropology. *Angle Orthod.* 1975;45:95–102.
2. Kloehn SJ. Orthodontics—force or persuasion. *Angle Orthod.* 1953;23:56–65.