

THE EDITOR'S CORNER

Managing Orthodontic Pain

Whenever I do a case presentation for a young patient and his or her parents, three questions invariably come up. The parents always ask, "How much is this going to cost?" and, "How long will it take?" Fair enough—I know I would ask the same questions if our roles were reversed. The kids always have a much more direct question: "Is this going to hurt?" Can't say as I blame them for asking that one, either. I'm generally wondering the same thing myself whenever I'm subjected to any medical or dental procedure. I always do my best to calm my patients' fears about potential pain while remaining completely honest about the possibility that some things I do might hurt a little or make their teeth a little sore for a couple of days afterwards. Instinctively, caring practitioners do their best to minimize any potentially painful procedures.

While it would be nice to assume that pain management is not a significant part of orthodontic practice, contemporary behavioral research shows us otherwise. In 1988, Larry White published a landmark paper that demonstrated the importance of pain management in eliciting patient cooperation.* Among the techniques he espoused to "tame the pain" were using appliances with the greatest possible inter- and intrabacket distances; placing the most resilient wires possible; using gradually increasing, continuous forces; and having the patient chew on a bite wafer or chewing gum after each adjustment to prevent periodontal capillary strangulation. In the same article, White also espoused the prescription of analgesics immediately after adjustments. Although many of these pain-prevention procedures may seem like commonsense patient management (take two aspirin and call me in the morning), it is not uncommon for them to be overlooked in orthodontic offices.

Pain management and, even more important, pain prevention are given short shrift in many orthodontic training programs. In fact, I can't remember *any* lectures

*White, L.W.: A new paradigm of motivation, PCSO Bull., Winter 1988, pp. 44-45.

or seminars on the subject of pain during my education. In the first graduate program in which I held a faculty position, when the issue of local anesthetic was raised by an intelligent young first-year resident, the department chairman responded that anesthesia was something “we leave behind” when we choose to specialize in orthodontics. I remember being a little surprised at his response. Having spent the better part of a decade as a general dentist before returning to school to specialize, I had never even considered bidding farewell to local anesthetics.

I have not seen any formal surveys, but from talking to orthodontists around the country, I get the feeling that only about half of them occasionally use either topical or local anesthesia. In my office, I keep a mobile cart in the corner with a small armamentarium of devices and gadgets designed to address specific problems that are uncommon, but occur often enough to warrant advance preparations. Among the step-up pliers, band converters, temporary restorative cement, and turbo bonders are a small jar of topical anesthetic and a syringe with a couple of carpules of lidocaine and carbocaine. They are called into service about once a year—not very often, to be sure, but when I need them, I need them.

A recently introduced delivery medium for dental anesthetics warrants further investigation for use in the orthodontic office. To quote the online package insert, “Oraqix** (lidocaine and prilocaine periodontal gel) 2.5%/2.5% is a microemulsion in which the oil phase is a eutec-

**Registered trademark of AstraZeneca AB, Sweden; distributed by Dentsply Pharmaceutical, 570 W. College Ave., York, PA 17404; www.dentsplypharma.com.

tic mixture of lidocaine and prilocaine in a ratio of 1:1 by weight.” Designed to form an elastic gel in periodontal pockets, the product is delivered into those pockets by means of a supplied applicator. Although it was originally intended as a non-injection topical/local anesthetic for periodontal scaling procedures, it shows promise for orthodontic procedures such as band fitting and cementation, archwire ligation, and band or bracket removal. These seldom warrant the level of local anesthetic provided by a mandibular block or maxillary infiltration, but they can be rendered almost entirely painless by the use of this new delivery system, which simply introduces the anesthetic agent into the gingival crevices of the affected teeth. Most adolescent patients recoil at the very thought of the dreaded “shot”, but when they are reassured that no needle is involved and that the end result of the administration of the anesthetic will be a painless appointment, they are quick to acquiesce. Of course, conventional topical anesthetics can still be used for specific procedures, such as lubricating separators with benzocaine before placement. The difference with this new product is that it can be delivered directly into the gingival crevice.

The subject of pain management in the orthodontic office needs more attention from our teachers and researchers. To date, I am unaware of any controlled clinical trials of Oraqix in orthodontic applications, but if it will enable us to render acceptable levels of anesthesia for the relatively few painful procedures we do, without having to resort to injections, they are indeed called for. This would be fine fodder for a master's thesis or resident research project. I look forward to the resulting paper.

RGK