As I wrote last month, painless dentistry is the best marketing tool dentists can possess. Even though many know how to provide it, there are too many times when we don’t take the sufficient amount of time to actually do it. And yet, there are still various techniques that many dentists are not aware of. Here in Part II, I want to share several more concepts that will allow all of us to truly provide painless dentistry.

**Mandibular Block & the Long, Long Buccal**

When it comes to giving effective mandibular blocks, I used to think that there were two categories of dentists: those who admit missing most of their blocks and those who would lie about anything. I admit it! For most of my career I have been frustrated with one of the most stress-related dilemmas in dentistry. There are not many things worse than putting the patient through needless discomfort if only for that brief second when they realize they are not completely numb. We peel the patient off the ceiling and re-anesthetize. That’s probably the number-one thing that gives dentistry a bad name and creates true dental phobics. I know most patients, including myself, are always bracing for that quick zing of pain that we hope will never come. Not only do we lose from a public relations point of view, we also lose tremendously from an efficiency point of view that literally costs us plenty of production dollars. When we have to give more anesthetic, it puts us behind, which in turn does not allow us opportunities to work in emergencies or other procedures.

The secret to a successful mandibular block is to give a long, long buccal. I’ll prove it to you this week. The next patient you have who isn’t totally numb with your mandibular block, do the following. Ask them if their lower lip and chin is numb. If it is, then go back with about a half a carpule of anesthetic and give the injection lateral and distal to the second molar while inserting the needle 3/4 of an inch lateral to the outside border of the mandible and aim the needle towards the angle of the mandible (Fig. 1). As you’re giving it, you might sense that they are feeling it if you do not go real slow. But, the good news is that if they feel that injection, then you know your patient will be profoundly numb within two or three minutes. If you’re having trouble with your blocks, do yourself and your patients a favor and give this technique a try.

**Gow-Gates Injection**

At my seminars I explain that I still have trouble with mandibular blocks because many times I do not give the long, long buccal right away because it can be an uncomfortable injection. Several doctors have convinced me to start doing the Gow-Gates injection technique. I’ve come to find out that I can miss that injection almost as often as the conventional mandibular block injection! Well, not quite as often. I’m getting better with it and prefer it to the conventional block.

This block is named after the Australian dentist named Dr. George A.E. Gow-Gates who invented this technique in the mid 1970s. Unlike the mandibular block, the path the needle traverses during a Gow-Gates block contains much less muscle tissue than is traversed by the needle in a standard mandibular block, and thus there is little release of bradykinins which are the chemicals which cause the aching that patients feel when receiving a mandibular block. Furthermore, the tissue through which the needle passes contains no nerve receptors, and thus there is little direct pain during the injection. It is not uncommon for patients to remark that they felt nothing during the injection. The area where the Gow-Gates is delivered is less vascularized than the area adjacent to the location of injection in a standard mandibular block. Studies indicate that there is an 89-90 percent lower likelihood of giving an intra-vascular injection using this technique. In addition, because of the lower vascularization in the area, the anesthesia is less rapidly absorbed into adjacent blood vessels prolonging the presence of the anesthesia in the area, which means that mepivicaine without vasoconstrictor may be used to greater and longer lasting effect using the Gow-Gates. Some users of this technique recommend that no vasoconstrictor be used at all.

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**Fig. 1**

Photo courtesy of www.doctorspillers.com

**Fig. 2**
Finally, the Gow-Gates anesthetizes the nerve trunk before it splits into its three main branches; the lingual branch, the buccal branch and the alveolar branch. Thus the Gow-Gates delivers three shots in one. Here’s the technique:

- With the patient lying fully reclined in the chair, have the patient open his/her mouth as wide as possible. This technique is not possible if the patient is not able to open wide enough to allow the condyles to translate fully over the articular eminences.
- Place your thumb in the patient’s mouth retracting the cheek. The thumb should be relatively close to the site of the entry point of the needle noted in Figure 2.
- Place the middle finger of the same hand over the intertragal notch. This landmark is easily felt with the finger. Thus the hand is held in a “C” with the thumb inside the mouth retracting the cheek and the middle finger outside the mouth placed firmly over the intertragal notch (Fig. 3).
- Using a long 27-gauge needle, and holding the handle of the syringe at about the level of the lower premolars, allow the needle to enter the buccal mucosa just distal and apical to the tuberosity. (See the arrow in the intra-oral image on the previous page.)
- Now aim the tip of the needle toward the intertragal notch. This is fairly easy because you can feel the notch under your middle finger, so in effect, you are simply aiming for your finger! Keeping the middle finger in this position, and using it as the aiming point makes giving the Gow-Gates block easy and predictable.
- Proceed until the needle hits bone. The needle will enter about two-thirds to three-quarters of its length before hitting bone. If the needle does not hit bone, then you have missed the target and should withdraw and try again, aiming slightly laterally, or medially.
- Once the needle hits bone, aspirate and then inject the entire carpule slowly.
- After withdrawing the needle, ask the patient to remain open wide for about one minute after the shot.

(Acknowledgements to Dr. Martin Spiller, www.doctorspiller.com).

**Septocaine**

Septocaine is my preferred anesthetic and I use it in most situations. It has a rapid onset, penetrates the tissues more pro-
foundly, and has a duration time comparable to Lidocaine 2%. Keep in mind that the maximum dose is less than other anesthetics: seven cartridges verses 11 cartridges of Lidocaine 2% for a 154 lb. healthy patient.

Because it is a more profound anesthetic, I rarely give a palatal injection when doing an endo procedure or a crown prep on upper teeth. And of course, operative procedures on teeth anterior to the molars are done with just local infiltration.

Be aware that all 4% solutions are more prone to occurrences of paraesthesia. Therefore, if you are like most dentists who routinely give two carpules for their mandibular blocks, I wouldn’t recommend using Septocaine. When I give a Gow-Gates injection, I just use one carpule of Septocaine.

The X-Tip

In very rare situations when even my Paroject won’t anesthetize a difficult tooth, the X-Tip does the job. This is an intra-osseous injection that works 100 percent of the time. It is very easy to use once you get over the apprehension of injecting into the bone. You first give a little local anesthetic in the area you plan to insert the drill that will perforate the bone. Insert the latch type perforator drill into your hand-piece and run it full speed while applying pulsating pressure until you feel it drop into the cancellous bone just distal to the tooth that you will be working on. After removing the handpiece, a button with a sleeve is left in the bone. Now, you can easily use that as a guide to insert the short syringe needle. You don’t have to search around to find the hole that you prepared. Then, you inject about a half a carpule slowly. The area is immediately profoundly numb, and you can go to work right away!

Endo Ice or Component Cooler for Palatal Injections

Go to Radio Shack and purchase several cans of Component Cooler. It contains the same exact ingredients as Endo Ice yet for half the price. Spray it on a cotton tip applicator and place on the palate at the injection site for about five seconds. After the tissue blanches white, you can give a more comfortable injection. Many patients don’t feel anything at all with it. Give it a try!

We have many options available to us today to help provide pain-free dentistry to our patients. When we do this, the patients benefit and so does our bottom line. Find the right combination of analgesic systems that fit your particular office needs and take care of your patients to the highest level that is possible.

Author’s Bio

Dr. Joe Steven graduated from Creighton Dental School in 1978 and has been in solo practice in Wichita, Kansas up until June 2007 at which time his daughter, Dr. Jasmin Rupp, joined him. He is president of KISCO, a dental products marketing company, providing “new ideas for dentistry,” and is the editor of the KISCO Perspective Newsletter. Dr. Steven along with Dr. Mark Troilo present “The $1,000,000 Staff” & the “Team Dynamics” seminars. Dr. Steven also presents three other seminars: “Efficient-dentistry,” “Efficient-prosthetics” and “Efficient-endo.” Dr. Steven also provides the KISCO Select Consulting Program to dentists in the form of a monthly audio cd recording. (Contact info: jsteven@kiscodental.com, 800-325-8649, www.kiscodental.com)

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