Cotton roll injection technique

Arthur I. Klein, DDS, MSD

Dr. Klein is an associate professor of Pediatric Dentistry at Indiana University School of Dentistry, Bloomington, Indiana.

The administration of a local anesthetic to a child is a critical part of child management and in many instances determines how the child accepts dental treatment. The injection must be effective, efficiently given, and as painless as possible. These objectives can be obtained by:

1. Keeping the injection site dry and taut.
2. Distracting the child.
3. Pulling the tissue into the needle, barely penetrating the tissue.
4. Slowly injecting the anesthetic solution, just ahead of full needle penetration.

Needle preparation consists of placing a sterile one and one-half inch cotton roll onto the needle. This is done outside the child’s line of vision. The cotton roll is obtained from a sealed autoclaved syringe packet containing two additional cotton rolls (Fig 1).

Once you have established communications with the child, a dialogue similar to the following, adjusted to fit the dentist’s personality, is used.

Bobby, I am going to put this soft cotton on your tooth [place the cotton roll syringe on his nose] and put some sleepy medicine on it to make your tooth go to sleep. It will feel funny (Fig 2).

Bobby, open real wide, like a garage door. I am putting the cotton next to your tooth. [Place the cotton roll syringe in the vestibule to dry the area (Fig 3). Hold the cotton roll in position and pull the tissue tight with the roll while withdrawing the needle from the roll. Distract the child’s attention by lightly but firmly jerking his cheek while pulling the tissue over the needlepoint, barely penetrating the tissue. Slowly inject the solution ahead of full needle penetration (Fig 4)].

Bobby, look at me. [Look into the child’s eyes. The pupils will dilate slightly if there is any pain.] Your tooth is going to sleep. It is feeling funny now. Do you hear it snoring? Zzzzzzzz. [Withdraw the needle and replace it into the cotton roll]

Fig 1. Remove the cotton roll from the autoclaved syringe packet and place it on the syringe needle outside the child’s line of vision.

Fig 2. Place the cotton roll syringe on the tip of the child’s nose.

Fig 3. Place the cotton roll syringe in the vestibule adjacent to the injection site to dry the area.

Fig 4. Distract the child’s attention by lightly, but firmly, jerking the cheek while pulling the tissue over the needle point, barely penetrating the tissue and slowly injecting the solution ahead of full needle penetration.
This technique also can be used for palatal injections, although not as effectively. The cotton roll syringe is placed in the maxillary vestibule of the side of the injection site. The needle is removed from the roll. The index finger of the hand holding the roll places pressure on the injection site in an attempt to blanch the tissue and create anesthesia pressure to the site (Fig 5).

Bobby, I am going to push real hard with my finger, right here [Barely penetrate the blanched tissue beneath your index fingertip, injecting droplets slowly, ahead of full needle penetration.]

Reference

Fig 5. The index finger places pressure at the palatal injection site, blanching the tissue. Inject beneath the index fingertip into the blanched site.