Cotton roll injection technique

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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? Zzzzzzz.* [Withdraw the needle and replace it into the cotton roll

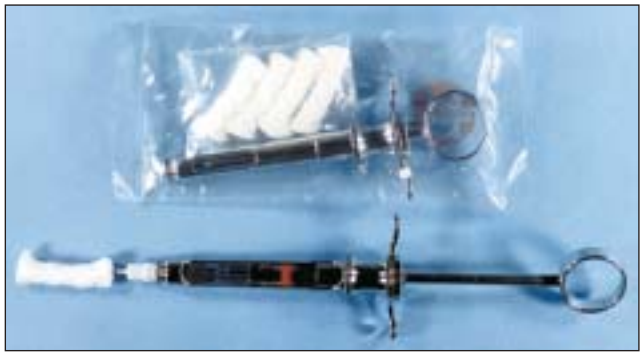

Fig 1. Remove the cotton roll from the autoclaved syringe packet and place it on the syringe needle outside the child's line of vision.

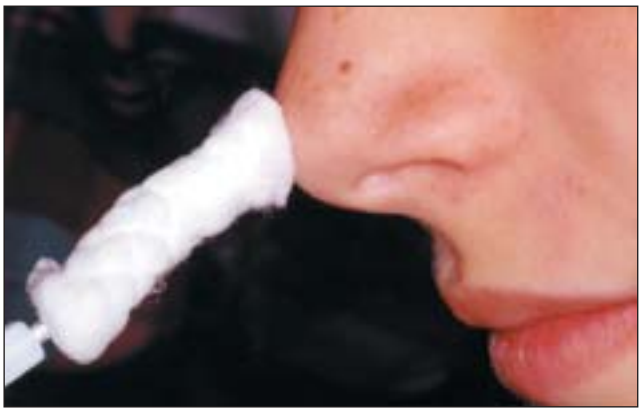

Fig 2. Place the cotton roll syringe on the tip of the child's nose.

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

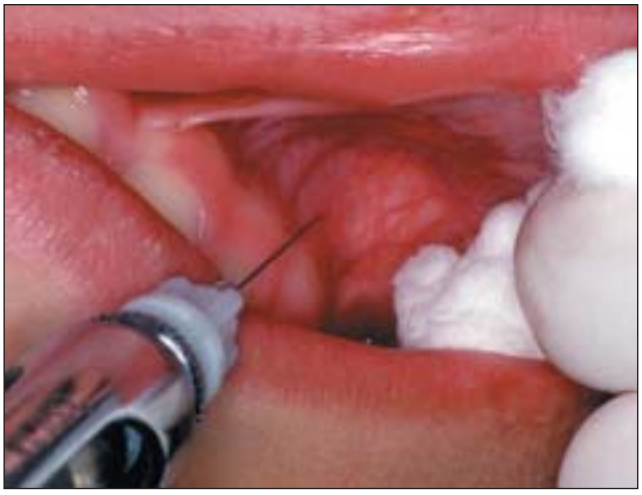

Fig 4. Distract the child's attention by lightly, but firmly, jerking the cheek while pulling the tissue over the needle point, barely penetrating the tissue and slowly injecting the solution ahead of full needle penetration.

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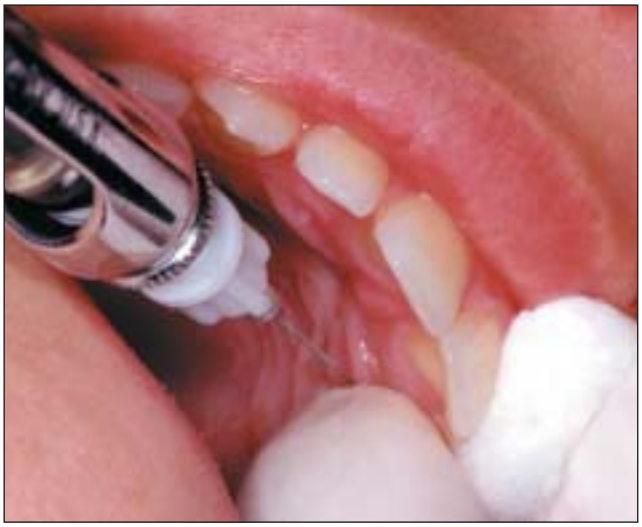

Fig 5. The index finger places pressure at the palatal injection site, blanching the tissue. Inject beneath the index fingertip into the blanched site.

before taking the cotton roll syringe out of the mouth. Continuing to talk to the child about the procedure, the "sleeping tooth," and your preparations for placing the rubber dam "raincoat" is helpful.]

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

1. Klein AI: The control of the dentist in the management of the child patient. J Dent Child 23:97-103 2nd Quarter, 1956.

clinical section

Abstracts of the Scientific Literature

Family Presence during Invasive Procedures

A prospective study using surveys (5-point Likert scale) of parents of children requiring intubation, placement of central lines, or chest tubes. Additional surveys were completed by bedside nurses to evaluate the effects of parental presence.

Parental presence significantly reduced the parental anxiety related to the procedure (P=.005; Mann-Whitney test), but did not change condition-related anxiety (P=0.9; Mann-Whitney test). Fifteen (94%) of 16 parents would repeat their choice to watch. Fifteen (94%) of 16 nurses found parents' presence helpful to the child and to the parents . One nurse found a parent's presence somewhat harmful to nurses and very harmful to the parent. Allowing parental presence during procedures decreases procedure-related anxiety. The implications of such a policy change on physicians and other aspects of pediatric intensive care, including medical education, need further evaluation.

Comments: The reader should keep in mind the following points: all children were under sedation, use of restraint is not stated, cooperation and behavior of patients were not measured, the cliniciansí personal preferences and views were not evaluated (only the nurses were questioned), the study is a pilot and has a limited number of participants. **AK**

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Family Presence During Invasive Procedures in the Pediatric Intensive Care Unit. A Prospective Study. Karen S. Powers, MD; Jeffrey S. Rubenstein, MD: Arch Pediatr Adolesc Med. 153:955-958, 1999.

Utilization of Physicians Offices by Adolescents in the United States

This study was a secondary analysis of the 1994 National Ambulatory Medical Case Survey. It focused on the utilization of physicians offices in the US by early (11-14 yrs.), middle (15-17 yrs.), and late (18-21 yrs.) adolescents. Adolescents aged 11-21 yrs. made 9.1% of the total office visits and represent 15.4% of the total population of the US in 1994. This underrepresentation in visits held across all three adolescent age subgroups. White adolescents were over-represented relative to their population while black and Hispanic adolescents were more likely to be uninsured than any other group.

Comments: The data from this study confirmed what a lot of us know from our own practices. As our inner city children mature, we often lose them to recall. It is both interesting and sad that we are not alone. **LPN**

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Utilization of physicians offices by adolescents in the United States. Ziv A, Boulet J, Slap G: Pediatrics 104:35-42, 1999.