Guidelines for Pain Control for Cosmetic and General Procedures

Good pain control starts with setting honest expectations. Here are pointers on communication and effective pain control techniques.

By Dee Anna Glaser, MD

Regardless of the procedure, pain control for patients is important. Most commonly dermatologists use topical and local anesthetics, and it is incumbent upon the physician to administer these as painlessly as possible. Of course, ensuring patient comfort depends on more than simply applying anesthesia. One of the first steps is to honestly prepare the patient for what to expect during the procedure and anesthetic administration. Talk in a calm and reassuring manner, but don't make promises that are impossible to keep. Reassure the patient that you and your staff will do everything possible to make the entire procedure and visit a good one.

Non-medical Considerations

It is paramount that the doctor and the staff understand what type of reactions the patient has had to past procedures and how the individual best handles discomfort. When possible, have a family member with the patient during these conversations. Note, however, that some patients will actually prefer to have their family members leave the room, though may be uncomfortable stating such. Present the option in a manner that allows the patient to comfortably state his/her preference.

Some patients don't want to see what is taking place during a procedure. In those cases I offer eye shields or masks. Some patients will benefit from audio distraction; I keep a radio and CD player handy for these patients. Many patients appreciate the opportunity to squeeze a hand or a stress ball. We keep stress balls in every room and cover them with a non-sterile exam glove before giving them to the patients.

Topical Anesthetics

The use of topical anesthetics can be very valuable even when local anesthetic is required. Several preparations are now available, providing good reduction in pain when applied under occlusion for at least 30 to 60 minutes. But for some patients, having a topical anesthetic cream on the surface for as little as 10 minutes produces some benefit, some of which may include a placebo effect which should not be discounted. I find this especially true for procedures such as injectable fillers and Botox (Allergan).

Another benefit of topical anesthetics may be prolongation of anesthesia. Robbins reported that the use of 2% lidocaine gel prolonged the anesthesia of injected lidocaine by 48 percent when used on the open wounds between stages in patients undergoing Mohs surgery.

Cold anesthesia is a very important tool in my office. Ice is the topical anesthetic that I most frequently use to reduce the real and perceived discomfort from an injection. Prepared coolants are available, but a plastic bag with a few ice cubes is a very inexpensive tool. An ice pack offers the added advantage of hiding the needle from the patient's view. I keep the ice pack on the skin and lift only enough to slip a needle under the skin.

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T ravel Smart. For patients who are either just starting the Obagi Nu-Derm Skin System or who travel frequently, Obagi recently introduced the Obagi Nu-Derm System Skin Transformation Sets. The Starter Set is designed as an easy-to-use introduction tool for patients new to the Nu-Derm System, while the Travel Set provides transportability, allowing patients to continue their regimen when away from home.

I t's a Guy Thing, Too. As many as 21 percent of men state that they would consider cosmetic surgery—a 50 percent increase from last year, according to a consumer attitudes survey included in the American Society for Aesthetic Plastic Surgery's recently released 2004 cosmetic surgery statistics. The ASAPS also reports that 11.9 million cosmetic procedures were performed last year—a 44 percent increase from 2003. Botox injections remained the most popular non-surgical procedure among men and women in 2004, while liposuction remained the most popular surgical procedure.
pack. This technique is very useful for younger patients and those with needle phobias. The induced vasoconstriction may also help minimize bruising.

Cryogen sprays are another option. Take care to keep the cryogen out of the eyes. Furthermore, avoid inhalation through the mouth or nose, which is unpleasant. Overuse can result in blister formation along with temporary and permanent pigmentation alteration. I avoid the use of sprays in general, but especially in darker skinned individuals who have an increased risk of post-inflammatory hyperpigmentation, post-inflammatory hypopigmentation, and even depigmentation.

**Injectable Anesthetics**

When it comes to injectable anesthetic, I prefer 1% lidocaine with epinephrine. Because acidity of the solution is a big determinate of pain upon injection, I buffer all lidocaine solutions before use. Sodium bicarbonate is added to the lidocaine in a 1:10 ratio, although some propose a 1:9 ratio. The higher pH level also increases the onset rate of analgesia. When the pH is raised, the proportion of uncharged base to charged cations changes, and the uncharged form diffuses across the nerve membrane.

Regardless of which agent is chosen, good injection technique is key to high patient satisfaction. Factors that play a role in patient comfort include the size of the needle used, puncture technique, volume injected, rate of injection, and mode of injection.

Always use a 30-gauge needle. Some dermatologists use a 32-gauge needle, which is more expensive and in my experience does not make a significant difference in patient comfort. These small gauge needles are easily dulled and may need to be changed.

A very quick insertion of the needle followed by a very slow injection affords the most comfort for patients. I pull any loose skin taut to aid in quick and unforced insertion of the needle.

The physician may reduce pain by controlling the depth of injection. An intradermal technique provides for rapid onset of anesthesia, but a subdermal injection is less painful. There are more nociceptors in the superficial dermis compared to the deep dermis. The tissue expansion of the dermis in and of itself is uncomfortable; avoid the induction of a wheal. Again, a slow injection technique is very important. The needle should be inserted into an already anesthetized area of the skin when possible.

Use of a pulsed injection technique has been reported to positively affect pain reduction. Zilinsky and colleagues favor injecting 0.1cc and counting to three before pushing in more anesthetic, gradually increasing the amount injected with each pulse. In my opinion, rate of injection and not the pulsations accounts for the improved outcome.

Distraction techniques are valuable for many doctors, although this is not a technique I personally use with any frequency. Too often I see the physician place his or her finger directly on the skin in front of the needle increasing the doctor’s risk for a needle stick.

The theory is that rubbing, tapping, or massaging the skin generates nerve impulses that prevent the pain impulses from getting through. If employed, tapping should begin a few seconds before the insertion of the needle and continued through the entire infiltration. The nose is one area on which I use this technique as it is a very sensitive region for my patients.

Use of a vibrator or hand-held massage unit is a better option in my opinion. There are more signals generated, and the surgeon’s hands are removed from the area to prevent needle stick accidents. A small unit can be covered with a sterile or non-sterile glove. An assistant can stabilize the unit near the site of injection and follow the surgeon as the injections move around the field.

**Comfort and Satisfaction**

The ability to provide painless anesthesia is important for patient comfort and satisfaction. I have covered several techniques for minimizing patient discomfort when using local anesthetics that can be used for all types of ambulatory and cosmetic procedures.


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