Fine-Tuning Your Local Anesthesia

Zelickson, B.R., et al. Finer needles reduce pain associated with injection of local anesthetic using a minimal insertion injection technique. *Dermatol Surg.* 2018; 44:204-208.

Almost all skin surgeons routinely use 30g syringes for their local anesthesia. However, many patients still complain and remember the pain associated with local anesthesia. Dermasurgeons at the Houston Methodist Hospital looked into whether they could observe a difference in pain outcomes by decreasing the needle size to 33g. They performed an IRB-approved single-blinded study on patients presenting for outpatient Mohs surgery. Three hundred and eighteen patients with head or neck tumors were injected with lidocaine using either a 30g or 33g needle. In all patients, they used 0.5% lidocaine HCl containing 1:200,000 epinephrine buffered 1:10 with 8.4% sodium bicarbonate at room temperature. All injections were by the same inves-

tigator (LHG) using the same technique of minimal needle insertion with the needle placed bevel down and parallel to the skin. On average, about 2 minutes were spent injecting the first full 3mL syringe. After injection, the patients were surveyed using a continuous 10-point visual assessment scale (VAS) for pain (0 = no pain, 10 = worst pain imaginable). They found that on the face, 77% of patients felt no pain with the 33g needle, compared with 64% for the 30g needles. On the scalp, 94% of patients felt no pain with the 33g needle vs 54% who felt no pain with the 30g needle. On the neck, there was no difference in pain levels between the two needles used.

Comment: As hair surgeons, we are constantly looking for ways to improve the tolerability of local anesthesia for our patients. Existing techniques include talkesthesia, vibration, chilling the area, and warming the anesthesia, and now we can add yet another technique—using 33g syringes. The authors' use of a diluted 0.5% lidocaine for the first pass, buffered with sodium bicarbonate, is also likely helpful in minimizing pain associated with anesthesia. ∎