Tapping Into Relief: A Distraction Technique to Reduce Pain During Dermatologic Procedures

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Managing pain during dermatologic procedures involving injections remains a considerable clinical challenge. Tapping distant bony areas may reduce pain via the gate control theory of pain. This simple, no-cost distraction technique can enhance patient comfort without disrupting workflow. By leveraging a fundamental neurophysiologic principle, this technique offers a practical solution to procedural discomfort during injections without the drawbacks associated with pharmacologic or device-based interventions.

Practice Gap

Pain during minimally invasive dermatologic procedures such as lidocaine injections, cryotherapy, nail unit injections, and cosmetic procedures including neurotoxin injections can cause patient discomfort leading to procedural anxiety, poor compliance with treatment regimens, and avoidance of necessary care. Current solutions to manage pain during dermatologic procedures present several limitations; for example, topical anesthetics seldom alleviate procedural pain,[1] particularly in sensitive areas (eg, nail unit, face) or for patients with a needle phobia. Additionally, topical anesthetics often require up to 2 hours to take effect, making them impractical for quick outpatient procedures. Other pain reduction strategies including vibration devices or cold sprays[2,3] can be effective but are an added expense to the physician or clinic, which may preclude their use in resource-limited settings. Psychological distraction techniques such as deep breathing require active patient participation and might reinforce pain expectations and increase patient anxiety.[4] Given these challenges, there is a need for effective, affordable, nonpharmacologic pain reduction strategies that can be integrated seamlessly into clinical practice to enhance the patient experience.

The Technique

Tapping is a simple noninvasive distraction technique that may alleviate procedural pain by exploiting the gate control theory of pain.[5] According to this theory, tactile stimuli activate mechanoreceptors that send inhibitory signals to the spinal cord, effectively closing the gate to pain transmission. Unlike the Helfer skin tap technique,[6] which involves 15 preinjection taps and 3 postinjection taps directly on the injection site, our approach targets distant bony prominences. This modification allows for immediate needle insertion without interfering with the sterile field or increasing the risk for needlestick injuries from tapping near the injection site. Bony sites such as the shoulder or knee are ideal for this technique due to their high density and rigidity that efficiently transmit tactile stimuli—similar to how sound travels faster through solids than through liquids or gases.[7]

To implement this technique in practice, we first stabilize the injection site to reduce movement from tapping. This can be done by stabilizing the injection site (eg, resting the hand on an instrument stand during a nail unit injection). A second person—such as a medical assistant, medical student, resident, or even the patient's family member—taps at a distant site at least an arm's length away from the injection site (Figure). The tapping pressure should be firm enough for the patient to feel the vibration

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FIGURE. Demonstration of a medical student tapping a patient's shoulder during nail unit injections.

but not forceful enough that it becomes unpleasant or disrupts the injection area. Tapping starts just before needle insertion and continues through the injection. No warning is given to the patient, as the surprise element may help distract them from pain. Varying the rhythm, intensity, or location of the tapping can enhance its distracting effect.

This tapping technique can be effectively combined with other pain reduction strategies in a multimodal approach; for example, when used concurrently with topical anesthetics, both the central (tapping) and peripheral (anesthetic) pain pathways are addressed, potentially yielding additive effects. For patients with a needle phobia, pairing tapping with cognitive distraction (eg, talkesthesia) may further reduce anxiety. In our nail specialty clinic at Weill Cornell Medicine (New York, New York), we often combine tapping with cold sprays and talkesthesia, which improves patient comfort without prolonging the visit. Importantly, the technique enables seamless integration with most pharmacologic and nonpharmacologic methods, eliminating the need for additional patient education or procedure time.

Practice Implications

The tapping technique described here is free, easy to implement, and requires no additional resources aside from another person to tap the patient during the procedure. It can be used for a wide range of dermatologic procedures, including biopsies, intralesional injections, and cosmetic treatments, including neurotoxin injections. The minimal learning curve and ease of integration into procedural workflows make this technique a valuable tool for dermatologists aiming to improve patient comfort without disrupting workflow. In our practice, we have observed that tapping reduces self-reported pain and helps ease anxiety, particularly in patients with a needle phobia. Its simplicity and accessibility make it a valuable addition to a wide range of dermatologic procedures. Prospective studies investigating patient-reported outcomes could help establish this technique's role in clinical practice.

Watch a video demonstration of this technique online

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