

## **INTRADERMAL LIDOCAINE FOR PERIPHERAL IV INSERTION: A CHANGE IN PRACTICE**

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**Overview:** Patients express anxiety and pain relating to the IV insertion. The current practice for starting IVs leaves the choice of providing an anesthetic to the discretion of the nurse, who did not always use an anesthetic. It is important to establish a trusting relationship with patients, and pain during the IV insertion does not promote trust. Patient dissatisfaction regarding IV insertions led us to review research on pain reduction methods.

**Research Question:** In a surgical patient requiring peripheral IV access, will the use of intradermal lidocaine decrease anxiety and pain, and promote comfort and patient satisfaction?

**Evidence:** Evidence based literature shows that using intradermal anesthetic decreases pain during the peripheral IV insertion. One paper, a randomized, double-blind, parallel-design, quasiexperimental study used a sample ( $N=148$ ) of patients receiving IVs by recording reported pain levels. A Clinical Evidence Review of several studies compared the effectiveness of lidocaine for IV insertion. A third paper found that patients ( $N=30$ ) wanted to be offered options for pain reduction during the IV insertion.

**Outcomes:** In all three studies, patients indicated satisfaction with lidocaine over any other pain reducing options, encouraging us to use lidocaine. We obtained approval, educated the nurses, and began using lidocaine for peripheral IV insertions, unless contraindicated. Over one month, we surveyed 235 patients to rate the effect of lidocaine in reducing their pain and anxiety, and to rate the skill of the nurse starting the IV. The results were that 186 patients indicated no pain, 46 indicated minimal pain, and 2 had some pain. Anxiety was reduced for 160 patients and 75 had little or no anxiety. The skill of the nurse was rated "very good" by 231 patients.

**Implications:** The research evidence from these articles, as well as our own survey results, has prompted lidocaine use as our standard of practice for peripheral IV insertion in Day Surgery. Continued satisfaction and promotion of lidocaine use has recently resulted in an executive level approval to use lidocaine for all hospitalized patients requiring a peripheral IV. It is our expectation that patient survey responses will continue to show an increase in satisfaction with their IV experience. The cost analysis for the lidocaine and TB syringe used for the intradermal lidocaine injection was found to be negligible, at approximately \$.29 per patient.