WHAT IS THE MOST COMFORTABLE (LEAST PAINFUL) METHOD OF ANESTHETIZING A PERIPHERAL INTRAVENOUS SITE?
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Introduction: Current practice for anesthetizing peripheral intravenous (I.V.) sites in our perioperative unit employs the use of 1% lidocaine injected intradermally. Although well accepted, some concerns include patient-related issues such as “burning” sensations with the intradermal injection and the need for two separate “sticks” (one to anesthetize the site and one for the I.V.). We questioned if a superior method might be determined.

Purpose: To compare three methods for anesthetizing peripheral intravenous sites prior to insertion to determine which method provides optimal patient comfort during the anesthetizing and intravenous insertion processes.

Methodology: Patients were randomly assigned to one of three methods. The “current method” involved anesthetizing the peripheral I.V. site with 1% lidocaine intradermally just prior to I.V. insertion. The second option was intradermal injection of 0.9% bacteriostatic normal saline just prior to I.V. insertion and the third option involved topical application of PainEase topical anesthetic spray just before I.V. insertion.

Results: Of 94 patients studied, all of the 39 patients who received intradermally inserted 1% lidocaine and all of the 27 patients who received intradermally injected bacteriostatic normal saline felt their overall experience was either just as, or better than, they expected. In comparison, only 67% of the 28 patients who received the PainEase topical anesthetic spray scored the experience just as, or better than expected. Thirty two percent of those receiving the PainEase topical anesthetic spray felt it was worse than expected (p <0.001).

Conclusion: Findings suggest that 1% lidocaine or bacteriostatic saline used intradermally prior to I.V. insertion are equally useful agents for anesthetizing peripheral intravenous sites prior to I.V. placement, both superior to local topical anesthetic spray.

Implications: This research is not only beneficial to the perianesthesia setting but in all practice areas that place peripheral I.V.’s. Future research is needed in the pediatric population.