

Comparison of the single-injection volar subcutaneous block and the two-injection dorsal block for digital anesthesia

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ABSTRACT

Objectives: Local digital nerve blockade is frequently used in many trauma cases. Two commonly used techniques of digital nerve block with local anesthetic are the two-injection dorsal technique and the single injection volar subcutaneous technique. In this study we compare various parameters of the single-injection volar subcutaneous block and the two-injection dorsal block. Pain score, amount of injected anesthetic, time of effect onset, patients' and physicians' satisfaction scores in each injection technique were compared.

Methods: 128 participating patients were randomly divided into two equal experimental groups. Two percentages Lidocaine was used as an anesthetic agent. Doses of 1.8 and 3 - 4 ml were used in the single injection subcutaneous block and the two-injection dorsal block groups, respectively. Following injections, the patients were asked to score their discomfort experience on a standard visual analog scale of 0 (no pain) to 10 (most pain imaginable). They also were asked to score the rate of their satisfaction from 1(no satisfaction) to 5 (most satisfaction). The onset of effect was determined using the pinprick test.

Results: Our results demonstrate that the two-injection dorsal block technique imposes more pain but the pain score difference was not statistically significant. Both patients and physicians were more comfortable with the single-injection subcutaneous digital block method. This satisfaction differences was statistically significant.

Conclusions: The single-injection method is more efficient and the patients were more pleased. The advantages of this method are its safety, user friendly, need of lower amount of anesthetic drug and its easiness to teach and learn.

Keywords: Hand Surgery; Volar Subcutaneous Block; Two-Injection Dorsal Block