The efficacy and acceptability of using a jet injector in performing digital blocks

George L. Ellis MD* and Ada Owens MS†
*Department of Biostatistics, Graduate school of Public Health, University of Pittsburgh, Pittsburgh, PA, USA
†Department of Emergency Medicine, Guthrie Clinic/Robert Packer Hospital, Sayre, PA, USA

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Abstract

This prospective, nonblinded study, comparing jet injection with needlesyringe injection of lidocaine in performing digital blocks, tested the hypothesis that jet injection can be used effectively as a less painful way to perform digital blocks. Twenty-four adult patients with injuries of the middle or distal phalanges of the fingers received digital blocks using a jet injector on one side of the finger and a needle-syringe on the other side; pain was assessed at 0, 1, 3, 6, 12, and 24 hours using visual analog scales. Differences in pain scores for the two procedures (jet injector vs needle) were tested at each time period using nonparametric statistical procedures for paired or matched data (paired Wilcoxon). At the time of injection (time 0) and at 12 hours, the jet had a significantly lower pain score than the needle. Comparisons made at the other points were statistically nonsignificant at .05. The anesthesia achieved using the jet injector was considered adequate in 23 of 24 patients. We conclude that the jet injector can be used effectively in performing digital blocks and is less painful than standard needle-syringe methods.

Keywords: Anesthesia; regional jet injection


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