

Abstract – 10th May 2022

Study objective: We test the hypothesis that anesthesia, measured as pain scores, induced by a novel topical anesthetic putty is non-inferior (margin=1.3) to that provided by conventional lidocaine infiltration for the repair of lacerations.

Methods: A randomized controlled trial was conducted in the emergency department (ED) of a local hospital. Participants were randomly allocated to receive either infiltration anesthesia or topical anesthetic putty as per the trial protocol. Pain scores were recorded 15 minutes after infiltration and 30 minutes after topical anesthetic putty application. Median pain scores were compared between groups. Wound evaluation scores were conducted after 7 to 10 days and adverse events were monitored for both groups of participants throughout the study.

Results: One hundred and ten participants were enrolled in the study, with 56 receiving infiltration and 54 receiving topical anesthetic putty. The median difference between the pain scores of the 2 groups was 0 (95% confidence interval -1 to 0). There were no substantial differences between the 2 groups in terms of either the wound evaluation scores or the incidence of adverse events.

Conclusion: The novel topical anesthetic putty was not inferior to infiltration with lidocaine with respect to the pain experienced during suturing, and this putty is a feasible alternative to infiltration anesthesia of lacerations in the ED.

Jenkins, M. G., Murphy, D. J., Little, C., McDonald, J., & McCarron, P. A. (2014). A non-inferiority randomized controlled trial comparing the clinical effectiveness of anesthesia obtained by application of a novel topical anesthetic putty with the infiltration of lidocaine for the treatment of lacerations in the emergency department. *Annals of emergency medicine*, 63(6), 704–710.

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