

Comparison of plain, warmed, and buffered lidocaine for anesthesia of traumatic wounds.

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Source

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Abstract

STUDY OBJECTIVE:

To compare pain on infiltration, need for additional anesthesia, and pain on suturing in patients given plain, warm, and buffered lidocaine preparations before the suturing of traumatic wounds in the emergency department.

DESIGN:

Randomized, prospective, single-blinded convenience sample.

SETTING:

University hospital ED.

PARTICIPANTS:

Patients with traumatic lacerations. Patients allergic to lidocaine and patients with abnormal mental status or altered pain sensorium were excluded.

INTERVENTIONS:

All wounds were anesthetized by use of a standard injection technique. Wound margins were anesthetized with plain, buffered, or warm lidocaine in a randomized fashion. Pain of infiltration was recorded for each margin by means of a previously validated visual-analogue pain scale.

RESULTS:

The main outcome parameter was pain of infiltration. Need for additional anesthesia and pain on suturing were secondary outcome parameters. We evaluated 45 patients. Pain on injection varied by the type of lidocaine (mean pain scores: plain, 8.2; buffered, 4.7 [P < .05 versus plain]; warm, 4.9 [P < .05 versus plain]). There was no significant difference between the mean pain scores of the groups given warm and buffered lidocaine (P = NS). Need for additional anesthesia and pain on suturing did not vary by the type of anesthesia. The order of injection was not found to influence results. Mean pain scores were not different for margins 1 and 2 in any of the groups (P = NS).

CONCLUSION:

Both buffered and warmed lidocaine were as efficacious as plain lidocaine, and they had significantly less pain associated with infiltration than did plain lidocaine. In EDs with fluid warmers, warmed lidocaine may be the most convenient, well-tolerated, efficacious lidocaine preparation for anesthesia of traumatic wounds.

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