

Local Anesthesia for IUD Insertion or Endometrial Biopsy

KEHINDE ENIOLA, MD, MPH, *Cone Health Family Medicine Program, Greensboro, North Carolina*

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Clinical Question

Is there a benefit to using local anesthesia for intrauterine device (IUD) insertion or endometrial biopsy?

Evidence-Based Answer

Topical application of lidocaine/prilocaine cream to the cervix reduces mean pain scores during IUD insertion. Intrauterine instillation of liquid anesthesia reduces median pain scores during endometrial biopsy. (Strength of Recommendation: B, based on a single randomized controlled trial.)

Evidence Summary

A 2015 randomized, controlled, triple-blinded study of 46 Iranian women examined the effectiveness of lidocaine/prilocaine 5% cream (25 mg of lidocaine and 25 mg of prilocaine per g) applied to the cervix in reducing pain from copper IUD insertion or removal.¹ Pain severity was assessed using a validated 10-cm visual analog scale after applying 5 g of cream to the cervix and external os with a cotton swab, then waiting seven minutes for anesthesia onset. Scores of 1 to 3, 4 to 6, 7 to 9, or 10 indicated mild, moderate, severe, and extremely severe pain, respectively. Pain severity during the first stage (tenaculum application) was significantly lower with lidocaine/prilocaine cream compared with placebo (mean pain scores of 1.5 vs. 4.3; $P < .001$). During the second stage (insertion of uterine sound), the mean pain score was also lower with lidocaine/prilocaine cream vs. placebo (3.1 vs. 5.2; $P < .001$). Similarly, the mean pain score during the last stage (insertion or removal of the IUD) was significantly lower with lidocaine/prilocaine cream vs. placebo (2.6 vs. 4.6; $P < .001$).

A randomized, double-blind, placebo-

controlled trial in pre- and postmenopausal women compared pain levels during endometrial biopsy using local intrauterine anesthesia and placebo.² Trial medications (0.9% saline for the control group vs. 0.5% levobupivacaine [no longer available in the United States] or 2% lidocaine for the experimental group) were identical in appearance and consistency. Technical variation was minimized by using a similar technique to instill 5 mL of unlabeled solution into the uterine cavity before endometrial biopsy using an 18-gauge angiocatheter. Endometrial biopsy was performed using the same technique by the same small group of resident physicians. Time between instillation and biopsy was 15 minutes to allow for anesthesia onset. Median pain scores during biopsy in the lidocaine and levobupivacaine groups were significantly lower than those in the control group (1 vs. 3; $P < .001$). Of note, insufficient biopsy material was obtained only in the control group (pathologists also blinded).

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Address correspondence to Kehinde Eniola, MD, MPH, at kehinde.eniola@conehealth.com. Reprints are not available from the author.

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