

## Effect of lidocaine vs ketorolac tromethamine on postoperative laparoscopy pain control: a randomized study

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**Objective:** To evaluate and compare the effectiveness of intraperitoneal lidocaine and intramuscular ketorolac tromethamine for immediate and delayed postoperative pain management in patients undergoing laparoscopy.

**Methods:** Design—Seventy-four patients were prospectively randomized into four groups: intraperitoneal lidocaine; intramuscular ketorolac; both drugs; neither drug.

**Setting—**Community Teaching Hospital Outpatient Surgery Center.

**Patients—**Private and clinic patients needing operative laparoscopy.

**Intervention—**One hundred milligrams of lidocaine was instilled into the peritoneal cavity just before the laparoscopy was completed. Sixty milligrams of ketorolac tromethamine was administered intramuscularly approximately 30 minutes before laparoscopy was completed.

**Main Outcome Measurements—**The amount of analgesic used, the time required in postanesthesia recovery area, and a pain intensity score were used to evaluate the postoperative pain.

**Results:** Pain intensity scores reported by those women receiving ketorolac and both medications were less than scores of untreated controls. Groups receiving either ketorolac, lidocaine, or both drugs required less morphine postoperatively.

**Conclusion:** Both intraperitoneal lidocaine or intramuscular ketorolac are effective in reducing the perception of pain and the amount of morphine required postoperatively.

## A randomized, placebo-controlled comparison of EMLA™ and dorsal penile nerve block for pain relief during neonatal circumcision

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**Objective:** To evaluate the relative efficacies of eutetic mixture of local anesthetics (EMLA™) cream and dorsal penile nerve block (DPNB) for pain relief during neonatal circumcision.

**Methods:** After parental informed consent, appropriate-for-gestational age, term, healthy newborns were randomized to receive either EMLA cream and placebo saline DPNB or placebo cream and 1% lidocaine DPNB. Placebo and EMLA cream were prepared by the pharmacy and applied by study nurses. Preloaded syringes of saline or 1% lidocaine were also prepared by the pharmacy for the DPNB injections. This ensured blinding of the surgeons and assistants at the time of circumcisions. Circumcisions were performed with the Gomco clamp technique by one of three obstetrics and gynecology residents. Pain levels were assessed by measuring pulse and respiratory rates and determining Brazelton states at each step of the circumcision. Videotapes were made of each procedure to allow later scoring by a single blinded observer for Brazelton states. Brazelton state scores increase with increased infant pain and distress, as do heart and respiratory rates. Means were compared by *t* test and proportions by  $\chi^2$ . A *P* value of .05 was considered statistically significant.

**Results:** A total of 60 infants were randomized, 29 to DPNB and 31 to EMLA. Preoperative Brazelton state scores, heart rates, and respiratory rates were similar in both groups. Brazelton state scores were lower in the DPNB group at each step of the procedure—*injection, dissection of the foreskin, clamp placement, and clamp removal*—and postoperatively and overall, but the differences only reached statistical significance during dissection and clamp removal. Heart and respiratory rates also were lower at all surgical steps in the DPNB group but only reached statistical significance during postoperative observation.

**Conclusions:** Although both EMLA and DPNB have been shown in other studies to decrease pain during neonatal circumcisions, DPNB has greater effectiveness in relieving the pain of circumcision.