

The duration of analgesia and comparative efficacy of liposomal bupivacaine and an elastomeric bupivacaine pump in a diverse surgical population were determined” Kenes et al (2015).

Abstract:

PURPOSE: The duration of analgesia and comparative efficacy of liposomal bupivacaine and an elastomeric bupivacaine pump in a diverse surgical population were determined.

METHODS: A retrospective cohort study was conducted to evaluate patient outcomes following liposomal bupivacaine and elastomeric bupivacaine pump use from January through June 2013. The primary objective of the study was to evaluate 24-hour postoperative opioid use (in morphine equivalents).

RESULTS: Sixty-seven liposomal bupivacaine and 262 elastomeric bupivacaine pump patients were included. Significant between-group differences were seen in American Society of Anesthesiologists physical status, patient-controlled analgesia use, postoperative nonopioid use, and surgical procedure. On univariate analysis, liposomal bupivacaine-in comparison with elastomeric bupivacaine pump -was associated with reduced median (interquartile range, IQR) 24-hour postoperative opioid use (33.0 mg morphine equivalents versus 70.4 mg morphine equivalents , $p < 0.001$) and median 72-hour postoperative opioid use (61.3 mg morphine equivalents versus 115.9 mg morphine equivalents , $p < 0.001$). However, after adjustment for potential confounders with linear regression analysis, study medication was not associated with a decrease in 24-hour (β coefficient for elastomeric bupivacaine pump: 10.26; 95% confidence interval : -8.42 to 28.95; $p = 0.281$) or 72-hour postoperative opioid use (β coefficient for elastomeric bupivacaine pump: 2.23; 95% CI: -29.88 to 34.34; $p = 0.891$).

CONCLUSION: No difference was found between patients who received liposomal bupivacaine compared with elastomeric continuous infusion bupivacaine from a traditional pump in 24- or 72-hour postoperative opioid utilization after adjustment for baseline differences.

Reference:

Kenes, M.T., Leonard, M.C., Bauer, S.R. and Wyman, M.J. (2015) Liposomal bupivacaine versus continuous infusion bupivacaine via an elastomeric pump for the treatment of postoperative pain. American Journal of Health-System Pharmacy. 72(23 Suppl 3), p.S127-32. DOI: 10.2146/ajhp150168.

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