

Abstract

Title: Efficacy of Liposomal Bupivacaine for Sternotomy and Coronary Artery Bypass Graft (CABG) and/or Valve Surgery

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Introduction: Local anesthetics, as part of the multimodal analgesia strategy, are widely used for controlling pain in post-surgical settings in conjunction with traditional opioids. Liposomal bupivacaine is one formulation that has gained FDA approval through studies in bunionectomies and hemorrhoidectomies. However, limited data is available for using Liposomal Bupivacaine in off-label indications such as sternotomies in cardiac surgery. While previous studies suggest that liposomal bupivacaine may be effective in reducing pain scores as well as opioid consumption, they compared liposomal bupivacaine to placebo in patients undergoing sternotomies in a small patient population.

Methods: This was a retrospective, single center, observational study. The purpose of this study was to determine if liposomal bupivacaine was efficacious in comparison to an active comparator in adult patients 18 years of age or older undergoing coronary artery bypass graft (CABG) and/or valve replacement surgery via median sternotomy. The primary objective of this study is to evaluate the impact of Liposomal bupivacaine against an active comparator such as bupivacaine or ropivacaine on opioid utilization in morphine milligram equivalence (MME) from 0-72 hours post-surgery.

Results: There was no statistical significance in the reduction of overall MME use among patients in the liposomal bupivacaine group when compared to the comparator group (114.2 mg vs 107.6mg, P = 0.38).

Conclusions: Data suggests not using liposomal bupivacaine for routine use in CABG and/or valve replacement through a median sternotomy as it was not shown to decrease overall MME.