Use of Liposomal Bupivacaine in Major Foot and Ankle Surgery

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Disclosures:

Chris Adair, MD: None

Bruce E. Cohen, MD: Amniox, Arthrex, Inc., DJ Orthopaedics, Wright Medical Technology, Inc.


W. Hodges Davis, MD: Amniox, Arthrex, Inc., DJ Orthopaedics, Wright Medical Technology, Inc.


J. Kent Ellington, MD: Amniox, Arthrex, Inc., BME, Conventusortho, Pacira, Zimmer

Authors received research grant from Pacira for this study
Introduction

- 40% of ambulatory foot and ankle surgery patients experience mod-severe pain at home.
- Multimodal pain regimens including oral pain medications and regional anesthesia are recommended.
Liposomal Bupivacaine

- Extended-release liposomal bupivacaine-based analgesics have been approved by the FDA for anesthetic injection
- Shown to provide extended pain relief and decrease opioid use
Purpose

• What effect does surgeon applied liposomal bupivacaine have on post-operative pain in patients undergoing major ankle and hindfoot surgery?
Prospective Study: 28 pts
Ankle arthrodesis, Tibiotalocalcaneal arthrodesis, Hindfoot arthrodesis, or Flatfoot procedure

- Popliteal block prior to surgery, GETA for procedure
- 20cc of liposomal bupivacaine mixed with 10cc of normal saline injected at the surgical site at conclusion of surgery

Data Collection
- PACU - VAS pain scale, narcotic use, anti-emetic use, length of time in PACU
- Home - Oral narcotic use, VAS pain scales throughout the day, patient satisfaction with post surgical pain relief, complications (Day of surgery – POD 3)
- First Post Op Visit - Patient satisfaction with post surgical pain relief and complications
*Greatest increase in VAS pain scores was seen from DOS to POD1 at 4:00 PM

*Satisfaction with pain control was greatest on POD3 at midday (R= -0.68)
*Average morphine equivalents from DOS to POD3 was 236.68 mg*
*Patients took the least amount of narcotic pain medications on DOS (28.83 mg)*
• On average, patients were very satisfied with pain management
  – 64% rated their satisfaction as $\geq 4$ (on a five-point scale)
• No postoperative wound complications, skin necrosis or persistent paresthesias
Summary

• Extended-release liposomal bupivacaine-based analgesics did not provide complete pain relief after the resolution of popliteal block.
• Low pain scores without further rise in pain complaints after POD1.
• Lowest pain scores were seen on POD3.
• Application of liposomal bupivacaine was safe without an increase in complications, wound problems or adverse reactions.
References


