“Wide-Awake” Foot and Ankle Surgery: A Prospective Comparison with General Anesthesia

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NO CONFLICT TO DISCLOSE

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My disclosure is in the Final AOFAS Mobile App.

I have no potential conflicts with this presentation.
The “Wide-Awake” Approach

The “wide-awake” approach to orthopaedic foot and ankle surgery:

• Patient anesthesia achieved with a surgeon-administered local anesthetic.
• Epinephrine provides vasoconstriction and hemostasis at the operative site.
• No tourniquet, regional blocks, general anesthesia, or sedation – the patient remains fully conscious during the operation.
• Well documented for hand and wrist surgery.¹⁻³
• Not yet reported in foot and ankle literature.
## Local Anesthetic Mixture

<table>
<thead>
<tr>
<th>Procedure Type</th>
<th>Sample Case</th>
<th>Saline Bag Size</th>
<th>Local Anesthesia Dosage</th>
<th>Sodium Bicarb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>Hammer toe correction, Hallux valgus procedure, First MTP fusion</td>
<td>50cc</td>
<td>Lidocaine 1% + 1:100 000 epi – 10mL  Bupivicaine 0.25% (no additive) – 5mL</td>
<td>1.5mL</td>
</tr>
<tr>
<td>Medium</td>
<td>Hoffmann procedure (RA), Talonavicular fusion, Midfoot fusion</td>
<td>100cc</td>
<td>Lidocaine 1% + 1:100 000 epi – 15mL  Bupivicaine 0.25% (no additive) – 10mL</td>
<td>2.5mL</td>
</tr>
<tr>
<td>Large</td>
<td>Ankle fracture ORIF, Bridle procedure</td>
<td>2 x 100cc</td>
<td>Lidocaine 1% + 1:100 000 epi – 30mL  Bupivicaine 0.25% (no additive) – 10mL</td>
<td>4mL</td>
</tr>
</tbody>
</table>
Prospective Patient Survey

- 18 wide-awake patients were compared to 6 patients who received general anesthesia.
- All patients underwent forefoot surgery (1st MTP fusion, etc.).
- All patients rated their pain and anxiety preoperatively and postoperatively.
- Wide-awake patients also rated their pain and anxiety every 15 minutes intraoperatively.
Prospective Patient Comparison

**Pain (0-10)**
- Preop
  - General Anes. (p = 0.863)
  - Wide-Awake (p < 0.001)
- Postop
  - General Anes. (p = 0.559)
  - Wide-Awake (p = 0.006)

**Anxiety (0-10)**
- Preop
  - General Anes. (p = 0.863)
  - Wide-Awake (p < 0.001)
- Postop
  - General Anes. (p = 0.559)
  - Wide-Awake (p = 0.006)
Wide-Awake Perioperative Results

Pain (0-10)

- Preop
- Intraop
- Postop

$P = 0.021$

Anxiety (0-10)

- Preop
- Intraop
- Postop

$P = 0.003$, $P = 0.002$
Concluding Points

- Wide-awake and general anesthesia patients have similar preoperative pain and anxiety.
- Wide-awake patients have a better postoperative experience.
- Wide-awake patients reported little to no pain during their surgery, suggesting that the technique is a safe and effective alternative to surgery with general anesthesia.
- Similar to results from wide-awake hand surgery.\(^4\text{-}^6\)
- Data collection is ongoing to strengthen these conclusions.
- Cost and safety benefits, and a valuable opportunity to interact with an unsedated patient.
- Surgeon presence may have impacted intraoperative patient reporting (i.e., resulting in favorable ratings).
- Our research group is formulating a method for objectively evaluating intraoperative pain and anxiety.
ACKNOWLEDGEMENT

The presenters would like to acknowledge the leadership, guidance, and patience of Dr. Don Lalonde.

This research would not be possible without his support and assistance.


